

# TERRY CARR'S BEST SCIENCE FICTION OF THE YEAR

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Science fiction can explain the importance of considering the advantages of change as well as its disadvantages: basically, it's a matter of balance, because before we can judge the merits of any given change we have to consider what options we have.

Our present state of thinking about the future mostly has to do with worrying about nuclear war. That's definitely a negative concern—rilly a bummer, akchilly—and there's a whole lot of science fiction that tells how awful our future will be if we ever let matters get to that point. But science fiction is about *all* of our possible futures, so most sf stories go far beyond current problems to consider the things that may happen centuries in the future, or in times much beyond.

The future is endless (whether or not we humans will be there), so sf writers have an enormous backdrop against which they can paint their canvases of tomorrow and tomorrow. They usually assume that we'll get to that endless future, either by avoiding nuclear war or by surviving it... and in that assumption lies science fiction's essential optimism.

For though the future will bring us terrible difficulties, the newspapers and magazines will warn us about those. Science fiction will continue to go beyond them, as all optimists must, always.

—Terry Carr

*PRESS ENTER* † John Varley

*You have a definite treat in store for you in this fascinating novella about theft-by-computer, murder, and a surprising vil-lain. Even if you're a computerphobe, as I sometimes am, the imagination and story-telling skill of John Varley will have you chuckling and nodding your head in delight—which is very appropriate, for after all, one of science fiction's prime virtues is its ability to combat future shock by drawing us into tomorrow in such delightful ways.*

*John Varley is one of the most successful writers in science fiction of the past decade. His novels include Titan, Wizard, and Demon, as well as the bestseller Millennium.*

"This is a recording. Please do not hang up until—"

I slammed the phone down so hard it fell onto the floor. Then I stood there, dripping wet and shaking with anger. Eventually, the phone started to make that buzzing noise they make when a receiver is off the hook. It's twenty times as loud as any sound a phone can normally make, and I always wondered why. As though it was such a terrible disaster: "Emergency! Your telephone is off the hook!!!"

Phone answering machines are one of the small annoyances of life. Confess, do you really *like* talking to a machine? But what had just happened to me was more than a petty irritation. I had just been called by an automatic dialing machine.

They're fairly new. I'd been getting about two or three such calls a month. Most of them come from insurance companies. They give you a two-minute spiel and then a number to call if you are interested. (I called back, once, to give them a piece of my mind, and was put on hold, complete with Muzak.) They use lists. I don't know where they get them.

I went back to the bathroom, wiped water droplets from the plastic cover of the library book, and carefully lowered my-self back into the water. It was too cool. I ran more hot water and was just getting my blood pressure back to normal when the phone rang again.

So I sat there through fifteen rings, trying to ignore it.

Did you ever try to read with the phone ringing?

On the sixteenth ring I got up. I dried off, put on a robe, walked slowly and deliberately into the living room. I stared at the phone for a while.

On the fiftieth ring I picked it up.

"This is a recording. Please do not hang up until the message has been completed. This call originates from the house of your next-door neighbor, Charles Kluge. It will repeat every ten minutes. Mister Kluge knows he has not been the best of neighbors, and apologizes in advance for the inconvenience. He requests that you go immediately to his house. The key is under the mat. Go inside and do what needs to be done. There will be a reward for your services. Thank you."

Click. Dial tone.

I'm not a hasty man. Ten minutes later, when the phone rang again. I was still sitting there thinking it over. I picked up the receiver and listened carefully.

It was the same message. As before, it was not Kluge's voice. It was something synthesized, with all the human warmth of a Speak'n'Spell.

I heard it out again, and cradled the receiver when it was done.

I thought about calling the police. Charles Kluge had lived next door to me for ten years. In that time I may have had a dozen conversations with him, none lasting longer than a minute. I owed him nothing.

I thought about ignoring it. I was still thinking about that when the phone rang again. I glanced at my watch. Ten minutes. I lifted the receiver and put it right back down.

I could disconnect the phone. It wouldn't change my life radically.

But in the end I got dressed and went out the front door, turned left, and walked toward Kluge's property.

My neighbor across the street, Hal Lanier, was out mowing the lawn. He waved to me, and I waved back. It was about seven in the evening of a wonderful August day. The shadows were long. There was the smell of cut grass in the air. I've always liked that smell. About time to cut my own lawn, I thought.

It was a thought Kluge had never entertained. His lawn was brown and knee-high and choked with weeds.

I rang the bell. When nobody came I knocked. Then I sighed, looked under the mat, and used the key I found there to open the door.

"Kluge?" I called out as I stuck my head in.

I went along the short hallway, tentatively, as people do when unsure of their welcome. The drapes were drawn, as always, so it was dark in there, but in what had once been the living room ten television screens gave more than enough light for me to see Kluge. He sat in a chair in front of a table, with his face pressed into a computer keyboard and the side of his head blown away.

Hal Lanier operates a computer for the L.A.P.D., so I told him what I had found and he called the police. We waited together for the first car to arrive. Hal kept asking if I'd touched anything, and I kept telling him no, except for the front door knob.

An ambulance arrived without the siren. Soon there were police all over, and neighbors standing out in their yards or talking in front of Kluge's house. Crews from some of the television stations arrived in time to get pictures of the body, wrapped in a plastic sheet, being carried out. Men and women came and went. I assumed they were doing all the standard police things, taking fingerprints, collecting

evidence. I would have gone home, but had been told to stick around.

Finally I was brought in to see Detective Osborne, who was in charge of the case. I was led into Kluge's living room. All the television screens were still turned on. I shook hands with Osborne. He looked me over before he said anything. He was a short guy, balding. He seemed very tired until he looked at me. Then, though nothing really changed in his face, he didn't look tired at all.

"You're Victor Apfel?" he asked. I told him I was. He gestured at the room. "Mister Apfel, can you tell if anything has been taken from this room?"

I took another look around, approaching it as a puzzle.

There was a fireplace and there were curtains over the windows. There was a rug on the floor. Other than those items, there was nothing else you would expect to find in a living room.

All the walls were lined with tables, leaving a narrow aisle down the middle. On the tables were monitor screens, key-boards, disc drives—all the glossy bric-a-brac of the new age. They were interconnected by thick cables and cords. Beneath the tables were still more computers, and boxes full of elec-tronic items. Above the tables were shelves that reached the ceiling and were stuffed with boxes of tapes, discs, cartridges... there was a word for it which I couldn't recall just then. It was software.

"There's no furniture, is there? Other than that..."

He was looking confused.

"You mean there was furniture here before?"

"How would I know?" Then I realized what the misunder-standing was. "Oh. You thought I'd been here before. The first time I ever set foot in this room was about an hour ago."

He frowned, and I didn't like that much.

"The medical examiner says the guy had been dead about three hours. How come you came over when you did, Victor?"

I didn't like him using my first name, but didn't see what I could do about it. And I knew I had to tell him about the phone call.

He looked dubious. But there was one easy way to check it out, and we did that. Hal and Osborne and I and several others trooped over to my house. My phone was ringing as we entered.

Osborne picked it up and listened. He got a very sour expression on his face. As the night wore on, it just got worse and worse.

We waited ten minutes for the phone to ring again. Os-borne spent the time examining everything in my living room. I was glad when the phone rang again. They made a record-ing of the message, and we went back to Kluge's house.

Osborne went into the back yard to see Kluge's forest of antennas. He looked impressed.

"Mrs. Madison down the street thinks he was trying to contact Martians," Hal said, with a laugh. "Me, I just thought he was stealing HBO." There were three parabolic dishes. There were six tall masts, and some of those things you see on telephone company buildings for transmitting microwaves.

Osborne took me to the living room again. He asked me to describe what I had seen. I didn't know what good that would do, but I tried.

"He was sitting in that chair, which was here in front of this table. I saw the gun on the floor. His hand was hanging down toward it."

"You think it was suicide?"

"Yes, I guess I did think that." I waited for him to comment but he didn't. "Is that what you think?"

He sighed. "There wasn't any note."

"They don't always leave notes," Hal pointed out.

"No, but they do often enough that my nose starts to twitch when they don't." He shrugged. "It's probably nothing."

"That phone call," I said. "That might be a kind of suicide note."

Osborne nodded. "Was there anything else you noticed?"

I went to the table and looked at the keyboard. It was made by Texas Instruments, model TI-99/4A. There was a large bloodstain on the right side of it, where his head had been resting.

"Just that he was sitting in front of this machine." I touched a key, and the monitor screen behind the keyboard immediately filled with words. I quickly drew my hand back, then stared at the message there.

PROGRAM NAME: GOODBYE REAL WORLD

DATE: 8/20

CONTENTS: LAST WILL AND TESTAMENT; MISC.

FEATURES

PROGRAMMER: "CHARLES KLUGE"

TO RUN PRESS ENTERB

The black square at the end flashed on and off. Later I learned it was called a cursor.

Everyone gathered around. Hal, the computer expert, explained how many computers went blank after ten minutes of no activity, so the words wouldn't be burned into the television screen. This one had been green until I touched it, then displayed black letters on a blue background.

"Has this console been checked for prints?" Osborne asked.

Nobody seemed to know, so Osborne took a pencil and used the eraser to press the ENTER key.

The screen cleared, stayed blue for a moment, then filled with little ovoid shapes that started at the top of the screen and descended like rain. There were hundreds of them in many colors.

"Those are pills," one of the cops said, in amazement. "Look, that's gotta be a Quaalude. There's a Nembutal." Other cops pointed out other pills. I recognized the distinctive red stripe around the center of a white capsule that had to be a Dilantin. I had been taking them every day for years.

Finally the pills stopped falling, and the damn thing started to play music at us. "Nearer My God To Thee," in three-part harmony.

A few people laughed. I don't think any of us thought it was funny—it was creepy as hell listening to that eerie dirge—but it sounded like it had been scored for penny whistle, calliope, and kazoo. What could you do but laugh?

As the music played, a little figure composed entirely of squares entered from the left of the screen and jerked spastically toward the center. It was like one of those human figures from a video game, but not as detailed. You had to use your imagination to believe it was a man.

A shape appeared in the middle of the screen. The "man" stopped in front of it. He bent in the middle, and something that might have been a chair appeared under him.

"What's that supposed to be?"

"A computer. Isn't it?"

It must have been, because the little man extended his arms, which jerked up and down like Liberace at the piano. He was typing. The words appeared above him.

SOMEWHERE ALONG THE LINE I MISSED SOME-THING. I SIT HERE, NIGHT AND DAY, A SPIDER IN THE CENTER OF A COAXIAL WEB, MASTER OF ALL I SURVEY... AND IT IS NOT ENOUGH. THERE MUST BE MORE.

ENTER YOUR NAME HEREB

"Jesus Christ," Hal said. "I don't believe it. An interac-tive suicide note."

"Come on, we've got to see the rest of this."

I was nearest the keyboard, so I leaned over and typed my name. But when I looked up, what I had typed was VICT9R.

"How do you back this up?" I asked.

"Just enter it," Osborne said. He reached around me and pressed enter.

DO YOU EVER GET THAT FEELING, VICT9R? YOU HAVE WORKED ALL YOUR LIFE TO BE THE BEST THERE IS AT WHAT YOU DO, AND ONE DAY YOU WAKE UP TO WONDER WHY YOU ARE DOING IT? THAT IS WHAT HAPPENED TO ME.

DO YOU WANT TO HEAR MORE, VICT9R? Y/NB

The message rambled from that point. Kluge seemed to be aware of it, apologetic about it, because at the end of each forty-or fifty-word paragraph the reader was given the Y/N option.

I kept glancing from the screen to the keyboard, remember-ing Kluge slumped across it. I thought about him sitting here alone, writing this.

He said he was despondent. He didn't feel like he could go on. He was taking too many pills (more of them rained down the screen at this point), and he had no further goal. He had done everything he set out to do. We didn't understand what he meant by that. He said he no longer existed. We thought that was a figure of speech.

ARE YOU A COP, VICT9R? IF YOU ARE NOT, A COP WILL BE HERE SOON. SO TO YOU OR THE COP: I WAS NOT SELLING NARCOTICS. THE DRUGS IN MY BEDROOM WERE FOR MY OWN PERSONAL USE. I USED A LOT OF THEM. AND NOW I WILL NOT NEED THEM ANYMORE.

PRESS ENTERB

Osborne did, and a printer across the room began to chat-ter, scaring the hell out of all of us. I could see the carriage zipping back and forth, printing in both directions, when Hal pointed at the screen and shouted.

"Look! Look at that!"

The compugraphic man was standing again. He faced us. He had something that had to be a gun in his hand, which he now pointed at his head.

"Don't do it!" Hal yelled.

The little man didn't listen. There was a denatured gunshot sound, and the little man fell on his back. A line of red dripped down the screen. Then the green background turned to blue, the printer shut off, and there was nothing left but the little black corpse lying on its back and the word **\*\*DONE\*\*** at the bottom of the screen.

I took a deep breath, and glanced at Osborne. It would be an understatement to say he did not look happy.

"What's this about drugs in the bedroom?" he said.

We watched Osborne pulling out drawers in dressers and bedside tables. He didn't find anything. He looked under the bed, and in the closet. Like all the other rooms in the house, this one was full of computers. Holes had been knocked in walls for the thick sheaves of cables.

I had been standing near a big cardboard drum, one of several in the room. It was about thirty gallon capacity, the kind you ship things in. The lid was loose, so I lifted it. I sort of wished I hadn't.

"Osborne," I said. "You'd better look at this."

The drum was lined with a heavy-duty garbage bag. And it was two-thirds full of Quaaludes.

They pried the lids off the rest of the drums. We found drums of amphetamines, of Nembutals, of Valium. All sorts of things.

With the discovery of the drugs a lot more police returned to the scene. With them came the television camera crews.

In all the activity no one seemed concerned about me, so I slipped back to my own house and locked the door. From time to time I peeked out the curtains. I saw reporters inter-viewing the neighbors. Hal was there, and seemed to be having a good time. Twice crews knocked on my door, but I didn't answer. Eventually they went away.

I ran a hot bath and soaked in it for about an hour. Then I turned the heat up as high as it would go and got in bed, under the blankets.

I shivered all night.

\* \* \*

Osborne came over about nine the next morning. I let him in, Hai followed, looking very unhappy. I realized they had been up all night. I poured coffee for them.

"You'd better read this first," Osborne said, and handed me the sheet of computer printout. I unfolded it, got out my glasses, and started to read.

It was in that awful dot-matrix printing. My policy is to throw any such trash into the fireplace, un-read, but I made an exception this time.

It was Kluge's will. Some probate court was going to have a lot of fun with it.

He stated again that he didn't exist, so he could have no relatives. He had decided to give all his worldly property to somebody who deserved it.

But who was deserving? Kluge wondered. Well, not Mr. and Mrs. Perkins, four houses down the street. They were child abusers. He cited court records in Buffalo and Miami, and a pending case locally.

Mrs. Radnor and Mrs. Polonski, who lived across the street from each other five houses down, were gossips.

The Andersons' oldest son was a car thief.

Marian Flores cheated on her high school algebra tests.

There was a guy nearby who was diddling the city on a freeway construction project. There was one wife in the neighborhood who made out with door-to-door salesmen, and two having affairs with men other than their husbands. There was a teenage boy who got his girlfriend pregnant, dropped her, and bragged about it to his friends.

There were no fewer than nineteen couples in the immedi-ate area who had not reported income to the IRS, or who had padded their deductions.



Kluge's neighbors in back had a dog that barked all night.

Well, I could vouch for the dog. He'd kept me awake often enough. But the rest of it was *crazy!* For one thing, where did a guy with two hundred gallons of illegal narcotics get the right to judge his neighbors so harshly? I mean, the child abusers were one thing, but was it right to tar a whole family because their son stole cars? And for another... how did he *know* some of this stuff?

But there was more. Specifically, four philandering hus-bands. One was Harold "Hal" Lanier, who for three years had been seeing a woman named Toni Jones, a co-worker at the L.A.P.D. Data Processing facility. She was pressuring him for a divorce; he was "waiting for the right time to tell his wife."

I glanced up at Hal. His red face was all the confirmation I needed.

Then it hit me. What had Kluge found out about *me*?

I hurried down the page, searching for my name. I found it in the last paragraph.

"... for thirty years Mr. Apfel has been paying for a mistake he did not even make. I won't go so far as to nominate him for sainthood, but by default—if for no other reason—I hereby leave all deed and title to my real property and the structure thereon to Victor Apfel."

I looked at Osborne, and those tired eyes were weighing me.

"But I don't *want* it!"

"Do you think this is the reward Kluge mentioned in the phone call?"

"It must be," I said. "What else could it be?"

Osborne sighed, and sat back in his chair. "At least he didn't try to leave you the drugs. Are you still saying you didn't know the guy?"

"Are you accusing me of something?"

He spread his hands. "Mister Apfel, I'm simply asking a question. You're never one hundred percent sure in a suicide. Maybe it was a murder. If it was, you can see that, so far, you're the only one we know of that's gained by it."

"He was almost a stranger to me."

He nodded, tapping his copy of the computer printout. I looked back at my own, wishing it would go away.

"What's this... mistake you didn't make?"

I was afraid that would be the next question.

"I was a prisoner of war in North Korea," I said.

Osborne chewed that over for a while.

"They brainwash you?"

"Yes." I hit the arm of my chair, and suddenly had to be up and moving. The room was getting cold. "No. I don't... there's been a lot of confusion about that word. Did they 'brain-wash' me? Yes. Did they succeed? Did I offer a confession of my war crimes and denounce the U.S. Government? No."

Once more, I felt myself being inspected by those decep-tively tired eyes.

"You still seem to have... strong feelings about it."

"It's not something you forget."

"Is there anything you want to say about it?"

"It's just that it was all so... no. No, I have nothing further to say. Not to you, not to anybody."

"I'm going to have to ask you more questions about Kluge's death."

"I think I'll have my lawyer present for those." Christ. Now I am going to have to get a lawyer. I didn't know where to begin.

Osborne just nodded again. He got up and went to the door.

"I was ready to write this one down as a suicide," he said. "The only thing that bothered me was there was no note. Now we've got a note." He gestured in the direction of Kluge's house, and started to look angry.

"This guy not only writes a note, he programs the fucking thing into his computer, complete with special effects straight out of Pac-Man.

"Now, I know people do crazy things. I've seen enough of them. But when I heard the computer playing a hymn, that's when I knew this was murder. Tell you the truth, Mr. Apfel, I don't think you did it. There must be two dozen motives for murder in that printout. Maybe he was blackmailing people around here. Maybe that's how he bought all those machines. And people with that amount of drugs usually die violently. I've got a lot of work to do on this one, and I'll find who did it." He mumbled something about not leaving town, and that he'd see me later, and left.

"Vic..." Hal said. I looked at him.

"About that printout," he finally said. "I'd appreciate it... well, they said they'd keep it confidential. If you know what I mean." He had eyes like a basset hound. I'd never noticed that before.

"Hal, if you'll just go home, you have nothing to worry about from me."

He nodded, and scuttled for the door.

"I don't think any of that will get out," he said.

It all did, of course.

It probably would have even without the letters that began arriving a few days after Kluge's death, all postmarked Tren-ton, New Jersey, all computer-generated from a machine no one was ever able to trace. The letters detailed the matters Kluge had mentioned in his will.

I didn't know about any of that at the time. I spent the rest of the day after Hal's departure lying in my bed, under the electric blanket. I couldn't get my feet warm. I got up only to soak in the tub or to make a sandwich.

Reporters knocked on the door but I didn't answer. On the second day I called a criminal lawyer—Martin Abrams, the first in the book—and retained him. He told me they'd probably call me down to the police station for questioning. I told him I wouldn't go, popped two Dilantin, and sprinted for the bed.

A couple of times I heard sirens in the neighborhood. Once I heard a shouted argument down the street. I resisted the temptation to look. I'll admit I was a little curious, but you know what happened to the cat.

I kept waiting for Osborne to return, but he didn't. The days turned into a week. Only two things of interest happened in that time.

The first was a knock on my door. This was two days after Kluge's death. I looked through the curtains and saw a silver Ferrari parked at the curb. I couldn't see who was on the porch, so I asked who it was.

"My name's Lisa Foo," she said. "You asked me to drop by."

"I certainly don't remember it."

"Isn't this Charles Kluge's house?"

"That's next door."

"Oh. Sorry."

I decided I ought to warn her Kluge was dead, so I opened the door. She turned around and smiled at me. It was blinding.

Where does one start in describing Lisa Foo? Remember when newspapers used to run editorial cartoons of Hirohito and Tojo, when the *Times* used the word "Jap" without embarrassment? Little guys with faces wide as footballs, ears like jug handles, thick glasses, two big rabbity teeth, and pencil-thin moustaches...

Leaving out only the moustache, she was a dead ringer for a cartoon Tojo. She had the glasses, and the ears, and the teeth. But her teeth had braces, like piano keys wrapped in barbed wire. And she was five-eight or five-nine and couldn't have weighed more than a hundred and ten. I'd have said a hundred, but added five pounds each for her breasts, so improbably large on her scrawny frame that all I could read of the message on her T-shirt was "POCK LIVE." It was only when she turned sideways that I saw the esses before and after.

She thrust out a slender hand.

"Looks like I'm going to be your neighbor for a while," she said. "At least until we get that dragon's lair next door straightened out." If she had an accent, it was San Fernando Valley.

"That's nice."

"Did you know him? Kluge, I mean. Or at least that's what he called himself."

"You don't think that was his name?"

"I doubt it. 'Kluge' means clever in German. And it's hacker slang for being tricky. And he sure was a tricky bugger. Definitely some glitches in the wetware." She tapped the side of her head meaningfully. "Viruses and phantoms and demons jumping out every time they try to key in. Software rot, bit buckets overflowing onto the floor..."

She babbled on in that vein for a time. It might as well have been Swahili.

"Did you say there were demons in his computers?"

"That's right."

"Sounds like they need an exorcist."

She jerked her thumb at her chest and showed me another half-acre of teeth.

"That's me. Listen, I gotta go. Drop in and see me anytime."

The second interesting event of the week happened the next day. My bank statement arrived. There were three deposits listed. The first was the regular check from the V.A., for \$487.00. The second was for \$392.54, interest on the money my parents had left me fifteen years ago.

The third deposit had come in on the twentieth, the day Charles Kluge died. It was for \$700,083.04.

A few days later Hall Lanier dropped by.

"Boy, what a week," he said. Then he flopped down on the couch and told me all about it.

There had been a second death on the block. The letters had stirred up a lot of trouble, especially with the police going house to house questioning everyone. Some people had confessed to things when they were sure the cops were closing in on them. The woman who used to entertain salesmen while her

husband was at work had admitted her infidelity, and the guy had shot her. He was in the County Jail. That was the worst incident, but there had been others, from fistfights to rocks thrown through windows. According to Hal, the IRS was thinking of setting up a branch office in the neighborhood, so many people were being audited.

I thought about the seven hundred thousand and eighty-three dollars.

And four cents.

I didn't say anything, but my feet were getting cold.

"I suppose you want to know about me and Betty," he said, at last. I didn't. I didn't want to hear *any* of this, but I tried for a sympathetic expression.

"That's all over," he said, with a satisfied sigh. "Between me and Toni, I mean. I told Betty all about it. It was real bad for a few days, but I think our marriage is stronger for it now." He was quiet for a moment, basking in the warmth of it all. I had kept a straight face under worse provocation, so I trust I did well enough then.

He wanted to tell me all they'd learned about Kluge, and he wanted to invite me over for dinner, but I begged off on both, telling him my war wounds were giving me hell. I just about had him to the door when Osborne knocked on it. There was nothing to do but let him in. Hal stuck around, too.

I offered Osborne coffee, which he gratefully accepted. He looked different. I wasn't sure what it was at first. Same old tired expression. . . no, it wasn't. Most of that weary look had been either an act or a cop's built-in cynicism. Today it was genuine. The tiredness had moved from his face to his shoulders, to his hands, to the way he walked and the way he slumped in the chair. There was a sour aura of defeat around him.

"Am I still a suspect?" I asked.

"You mean should you call your lawyer? I'd say don't bother. I checked you out pretty good. That will ain't gonna hold up, so your motive is pretty half-assed. Way I figure it, every coke dealer in the Marina had a better reason to snuff Kluge than you." He sighed. "I got a couple questions. You can answer them or not."

"Give it a try."

"You remember any unusual visitors he had? People com-ing and going at night?"

"The only visitors I *ever* recall were deliveries. Post office. Federal Express, freight companies. . . that sort of thing. I suppose the drugs could have come in any of those shipments."

"That's what we figure, too. There's no way he was dealing nickel and dime bags. He must have been a middle man. Ship it in, ship it out." He brooded about that for a while, and sipped his coffee.

"So are you making any progress?" I asked.

"You want to know the truth? The case is going in the toilet. We've got too many motives, and not a one of them that works. As far as we can tell, nobody on the block had the slightest idea Kluge had all that information. We've checked bank accounts and we can't find evidence of blackmail. So the neighbors are pretty much out of the picture. Though if he were alive, most people around here would like to kill him *now*."

"Damn straight," Hal said.

Osborne slapped his thigh. "If the bastard was alive, *I'd* kill him," he said. "But I'm beginning to think he never *was* alive."

"I don't understand."

"If I hadn't seen the goddam body..." He sat up a little straighter. "He said he didn't exist. Well, he practically didn't. The power company never heard of him. He's hooked up to their lines and a meter reader came by every month, but they never billed him for a single kilowatt. Same with the phone company. He had a whole exchange in that house that was *made* by the phone company, and delivered by them, and installed by them, but they have no record of him. We talked to the guy who hooked it all up. He turned in his records, and the computer swallowed them. Kluge didn't have a bank account anywhere in California, and apparently he didn't need one. We've tracked down a hundred companies that sold things to him, shipped them out, and then either marked his account paid or forgot they ever sold him anything. Some of them have check numbers and account numbers in their books, for accounts or even *banks* that don't exist."

He leaned back in his chair, simmering at the perfidy of it all.

"The only guy we've found who ever heard of him was the guy who delivered his groceries once a month. Little store down on Sepulveda. They don't have a computer, just paper receipts. He paid by check. Wells Fargo accepted them and the checks never bounced. But Wells Fargo never heard of him."

I thought it over. He seemed to expect something of me at this point, so I made a stab at it.

"He was doing all this by computers?"

"That's right. Now, the grocery store scam I understand, almost. But more often than not, Kluge got right into the basic programming of the computers and wiped himself out. The power company was never paid, by check or any other way, because as far as they were concerned, they weren't selling him anything.

"No government agency has ever heard of him. We've checked him with everybody from the post office to the CIA."

"Kluge was probably an alias, right?" I offered.

"Yeah. But the FBI doesn't have his fingerprints. We'll find out who he was, eventually. But it doesn't get us any closer to whether or not he was murdered."

He admitted there was pressure to simply close the felony part of the case, label it suicide, and forget it. But Osborne would not believe it. Naturally, the civil side would go on for some time, as they attempted to track down all Kluge's deceptions.

"It's all up to the dragon lady," Osborne said. Hal snorted.

"Fat chance," Hal said, and muttered something about boat people.

"That girl? She's still over there? Who is she?"

"She's some sort of giant brain from Cal Tech. We called out there and told them we were having problems, and she's what they sent." It was clear from Osborne's face what he thought of any help she might provide.

I finally managed to get rid of them. As they went down the walk I looked over at Kluge's house. Sure enough Lisa Foo's silver Ferrari was sitting in his driveway.

I had no business going over there. I knew that better than anyone.

So I set about preparing my evening meal. I made a tuna casserole—which is not as bland as it sounds, the way I make it—put it in the oven and went out to the garden to pick the makings for a salad. I was slicing cherry tomatoes and thinking about chilling a bottle of wine when it occurred to me that I had enough for two.

Since I never do anything hastily, I sat down and thought it over for a while. What finally decided me was my feet. For the first time in a week, they were warm. So I went to Kluge's house.

The front door was standing open. There was no screen. Funny how disturbing that can look, the dwelling wide open and unguarded. I stood on the porch and leaned in, but all I could see was the hallway.

"Miss Foo?" I called. There was no answer.

The last time I'd been here I had found a dead man. I hurried in.

Lisa Foo was sitting on a piano bench before a computer console. She was in profile, her back very straight, her brown legs in lotus position, her fingers poised at the keys as words sprayed rapidly onto the screen in front of her. She looked up and flashed her teeth at me.

"Somebody told me your name was Victor Apfel," she said.

"Yes. Uh, the door was open..."

"It's hot," she said, reasonably, pinching the fabric of her shirt near her neck and lifting it up and down like you do when you're sweaty. "What can I do for you?"

"Nothing, really." I came into the dimness, and stumbled on something. It was a cardboard box, the large flat kind used for delivering a jumbo pizza.

"I was just fixing dinner, and it looks like there's plenty for two, so I was wondering if you..." I trailed off, as I had just noticed something else. I had thought she was wear-ing shorts. In fact, all she had on was the shirt and a pair of pink bikini underpants. This did not seem to make her uneasy.

"... would you like to join me for dinner?"

Her smile grew even broader.

"I'd love to," she said. She effortlessly unwound her legs and bounced to her feet, then brushed past me, trailing the smells of perspiration and sweet soap. "Be with you in a minute."

I looked around the room again but my mind kept coming back to her. She liked Pepsi with her pizza; there were dozens of empty cans. There was a deep scar on her knee and upper thigh. The ashtrays were empty... and the long muscles of her calves bunched strongly as she walked. Kluge must have smoked, but Lisa didn't, and she had fine, downy hairs in the small of her back just visible in the green computer light. I heard water running in the bathroom sink, looked at a yellow notepad covered with the kind of penmanship I hadn't seen in decades, and smelled soap and remembered tawny brown skin and an easy stride.

She appeared in the hall, wearing cut-off jeans, sandals, and a new T-shirt. The old one had advertised BURROUGHS OFFICE SYSTEMS. This one featured Mickey Mouse and Snow White's Castle and smelled of fresh bleached cotton. Mickey's ears were laid back on the upper slopes of her incongruous breasts.

I followed her out the door. Tinkerbell twinkled in pixie dust from the back of her shirt.

"I like this kitchen," she said.

You don't really look at a place until someone says some-thing like that.

The kitchen was a time capsule. It could have been lifted bodily from an issue of *Life* in the early fifties. There was the hump-shouldered Frigidaire, of a vintage when that word had been a generic term, like kleenex or coke. The counter tops were yellow tile, the sort that's only found in bathrooms these days. There wasn't an ounce of Formica in the place. Instead of a dishwasher I had a wire rack and a double sink. There was no electric can opener, Cuisinart, trash compacter, or microwave oven. The newest thing in the whole room was a fifteen-year-old blender.

I'm good with my hands. I like to repair things.

"This bread is terrific," she said.

I had baked it myself. I watched her mop her plate with a crust, and she asked if she might have seconds.

I understand cleaning one's plate with bread is bad man-ners. Not that I cared; I do it myself. And other than that, her manners were impeccable. She polished off three helpings of my casserole and when she was done the plate hardly needed washing. I had a sense of ravenous appetite barely held in check.

She settled back in her chair and I re-filled her glass with white wine.

"Are you sure you wouldn't like some more peas?"

"I'd bust." She patted her stomach contentedly. "Thank you so much, Mister Apfel. I haven't had a home-cooked meal in ages."

"You can call me Victor."

"I just love American food."

"I didn't know there was such a thing. I mean, not like Chinese or... you *are* American, aren't you?" She just smiled. "What I mean—"

"I know what you meant, Victor. I'm a citizen, but not native-born. Would you excuse me for a moment? I know it's impolite to jump right up, but with these braces I find I have to brush *instantly* after eating."

I could hear her as I cleared the table. I ran water in the sink and started doing the dishes. Before long she joined me, grabbed a dish towel, and began drying the things in the rack, over my protests.

"You live alone here?" she asked.

"Yes. Have ever since my parents died."

"Ever married? If it's none of my business, just say so."

"That's all right. No, I never married."

"You do pretty good for not having a woman around."

"I've had a lot of practice. Can I ask you a question?"

"Shoot."

"Where are you from? Taiwan?"

"I have a knack for languages. Back home, I spoke pidgin American, but when I got here I cleaned up my act. I also speak rotten French, illiterate Chinese in four or five varie-ties, gutter Vietnamese, and enough Thai to holler, 'Me wanna see American Consul, pretty-damn-quick, you!'"

I laughed. When she said it, her accent was thick.

"I been here eight years now. You figured out where home is?"

"Vietnam?" I ventured.

"The sidewalks of Saigon, fer shure. Or Ho Chi Minh's Shitty, as the pajama-heads re-named it, may their dinks rot off and their butts be filled with jagged punjee-sticks. Pardon my French."

She ducked her head in embarrassment. What had started out light had turned hot very quickly. I sensed a hurt at least as deep as my own, and we both backed off from it.

"I took you for a Japanese," I said.

"Yeah, ain't it a pissar? I'll tell you about it some day. Victor, is that a laundry room through that door

there? With an electric washer?"

"That's right."

"Would it be too much trouble if I did a load?"

It was no trouble at all. She had seven pairs of faded jeans, some with the legs cut away, and about two dozen T-shirts. It could have been a load of boys' clothing except for the frilly underwear.

We went into the back yard to sit in the last rays of the setting sun, then she had to see my garden. I'm quite proud of it. When I'm well, I spend four or five hours a day working out there, year-round, usually in the morning hours. You can do that in southern California. I have a small greenhouse I built myself.

She loved it, though it was not in its best shape. I had spent most of the week in bed or in the tub. As a result, weeds were sprouting here and there.

"We had a garden when I was little," she said. "And I spent two years in a rice paddy."

"That must be a lot different than this."

"Damn straight. Put me off rice for *years*."

She discovered an infestation of aphids, so we squatted down to pick them off. She had that double-jointed Asian peasant's way of sitting that I remembered so well and could never imitate. Her fingers were long and narrow, and soon the tips of them were green from squashed bugs.

We talked about this and that. I don't remember quite how it came up, but I told her I had fought in Korea. I learned she was twenty-five. It turned out we had the same birthday, so some months back I had been exactly twice her age.

The only time Kluge's name came up was when she mentioned how she liked to cook. She hadn't been able to at Kluge's house.

"He has a freezer in the garage full of frozen dinners," she said. "He had one plate, one fork, one spoon, and one glass. He's got the best microwave oven on the market. And that's *it*, man. Ain't nothing else in his kitchen at *all*." She shook her head, and executed an aphid. "He was one weird dude."

When her laundry was done it was late evening, almost dark. She loaded it into my wicker basket and we took it out to the clothesline. It got to be a game. I would shake out a T-shirt and study the picture or message there. Sometimes I got it, and sometimes I didn't. There were pictures of rock groups, a map of Los Angeles, Star Trek tie-ins... a little of everything.

"What's the L5 Society?" I asked her.

"Guys that want to build these great big farms in space. I asked 'em if they were gonna grow rice, and they said they didn't think it was the best crop for zero gee, so I bought the shirt."

"How many of these things do you have?"

"Wow, it's gotta be four or five hundred. I usually wear 'em two or three times and then put them away."

I picked up another shirt, and a bra fell out. It wasn't the kind of bra girls wore when I was growing up. It was very sheer, though somehow functional at the same time.

"You like, Yank?" Her accent was very thick. "You oughtta see my sister!"

I glanced at her, and her face fell.

"I'm sorry, Victor," she said. "You don't have to blush." She took the bra from me and clipped it to the line.



She must have mis-read my face. True, I had been embar-rassed, but I was also pleased in some strange way. It had been a long time since anybody had called me anything but Victor or Mr. Apfel.

The next day's mail brought a letter from a law firm in Chicago. It was about the seven hundred thousand dollars. The money had come from a Delaware holding company which had been set up in 1933 to provide for me in my old age. My mother and father were listed as the founders. Cer-tain long-term investments had matured, resulting in my re-cent windfall. The amount in my bank was *after* taxes.

It was ridiculous on the face of it. My parents had never had that kind of money. I didn't want it. I would have given it back if I could find out who Kluge had stolen it from.

I decided that, if I wasn't in jail this time next year, I'd give it all to some charity. Save the Whales, maybe, or the L5 Society.

I spent the morning in the garden. Later I walked to the market and bought some fresh ground beef and pork. I was feeling good as I pulled my purchases home in my fold-up wire basket. When I passed the silver Ferrari I smiled.

She hadn't come to get her laundry. I took it off the line and folded it, then knocked on Kluge's door.

"It's me. Victor."

"Come on in, Yank."

She was where she had been before, but decently dressed this time. She smiled at me, then hit her forehead when she saw the laundry basket. She hurried to take it from me.

"I'm sorry, Victor. I meant to get this—"

"Don't worry about it," I said. "It was no trouble. And it gives me the chance to ask if you'd like to dine with me again."

Something happened to her face which she covered quickly. Perhaps she didn't like "American" food as much as she professed to. Or maybe it was the cook.

"Sure, Victor, I'd love to. Let me take care of this. And why don't you open those drapes? It's like a tomb in here."

She hurried away. I glanced at the screen she had been using. It was blank, but for one word: intercourse-p. I as-sumed it was a typo.

I pulled the drapes open in time to see Osborne's car park at the curb. Then Lisa was back, wearing a new T-shirt. This one said A CHANGE OF HOBBIT, and had a picture of a squat, hairy-footed creature. She glanced out the window and saw Osborne coming up the walk.

"I say, Watson," she said. "It's Lestrade of the Yard. Do show him in."

That wasn't nice of her. He gave me a suspicious glance as he entered. I burst out laughing. Lisa sat on the piano bench, poker-faced. She slumped indolently, one arm resting near the keyboard.

"Well, Apfel," Osborne started. "We've finally found out who Kluge really was."

"Patrick William Gavin," Lisa said.

Quite a time went by before Osborne was able to close his mouth. Then he opened it right up again.

"How the hell did you find that out?"

She lazily caressed the keyboard beside her.

"Well, of course I got it when it came into your office this morning. There's a little stoolie program tucked away in your computer that whispers in my ear every time the name Kluge is mentioned. But I

didn't need that. I figured it out five days ago."

"Then why the... why didn't you tell me?"

"You didn't ask me."

They glared at each other for a while. I had no idea what events had led up to this moment, but it was quite clear they didn't like each other even a little bit. Lisa was on top just now, and seemed to be enjoying it. Then she glanced at her screen, looked surprised, and quickly tapped a key. The word that had been there vanished. She gave me an inscrutable glance, then faced Osborne again.

"If you recall, you brought me in because all your own guys were getting was a lot of crashes. This system was brain-damaged when I got here, practically catatonic. Most of it was down and your guys couldn't get it up." She had to grin at that.

"You decided I couldn't do any worse than your guys were doing. So you asked me to try and break Kluge's codes without frying the system. Well, I did it. All you had to do was come by and interface and I would have downloaded N tons of wallpaper right in your lap."

Osborne listened quietly. Maybe he even knew he had made a mistake.

"What did you get? Can I see it now?"

She nodded, and pressed a few keys: Words started to fill her screen, and one close to Osborne. I got up and read Lisa's terminal.

It was a brief bio of Kluge/Gavin. He was about my age, but while I was getting shot at in a foreign land, he was cutting a swath through the infant computer industry. He had been there from the ground up, working at many of the top research facilities. It surprised me that it had taken over a week to identify him.

"I compiled this anecdotally," Lisa said, as we read. "The first thing you have to realize about Gavin is that he exists nowhere in any computerized information system. So I called people all over the country—interesting phone system he's got, by the way; it generates a new number for each call, and you can't call back or trace it—and started asking who the top people were in the fifties and sixties. I got a lot of names. After that, it was a matter of finding out who no longer existed in the files. He faked his death in 1967. I located one account of it in a newspaper file. Everybody I talked to who had known him knew of his death. There is a paper birth certificate in Florida. That's the only other evidence I found of him. He was the only guy so many people in the field knew who left no mark on the world. That seemed conclusive to me."

Osborne finished reading, then looked up.

"All right, Ms. Foo. What else have you found out?"

"I've broken some of his codes. I had a piece of luck, getting into a basic rape-and-plunder program he'd written to attack *other* people's programs, and I've managed to use it against a few of his own. I've unlocked a file of passwords with notes on where they came from. And I've learned a few of his tricks. But it's the tip of the iceberg."

She waved a hand at the silent metal brains in the room.

"What I haven't gotten across to anyone is just what this *is*. This is the most devious electronic weapon ever devised. It's armored like a battleship. It has to be; there's a lot of very slick programs out there that grab an invader and hang on like a terrier. If they ever got this far Kluge could deflect them. But usually they never even knew they'd been burgled. Kluge'd come in like a cruise missile, low and fast and twisty. And he'd route his attack through a dozen cut-offs.

"He had a lot of advantages. Big systems these days are heavily protected. People use passwords

and very sophisti-cated codes. But Kluge helped *invent* most of them. You need a damn good lock to keep out a locksmith. He helped *install* a lot of the major systems. He left informants behind, hidden in the software. If the codes were changed, the computer *itself* would send the information to a safe system that Kluge could tap later. It's like you buy the biggest, meanest, best-trained watchdog you can. And that night, the guy who *trained* the dog comes in, pats him on the head, and robs you blind."

There was a lot more in that vein. I'm afraid that when Lisa began talking about computers, ninety percent of my head shut off.

"I'd like to know something, Osborne," Lisa said.

"What would that be?"

"What is my status here? Am I supposed to be solving your crime for you, or just trying to get this system back to where a competent user can deal with it?"

Osborne thought it over.

"What worries me," she added, "is that I'm poking around in a lot of restricted data banks. I'm worried about somebody knocking on the door and handcuffing me. *You* ought to be worried, too. Some of these agencies wouldn't like a homi-cide cop looking into their affairs."

Osborne bridled at that. Maybe that's what she intended.

"What do I have to do?" he snarled. "Beg you to stay?"

"No. I just want your authorization. You don't have to put it in writing. Just say you're behind me."

"Look. As far as L.A. County and the State of California are concerned, this house doesn't exist. There is no lot here. It doesn't appear in the assessor's records. This place is in a legal limbo. If anybody can authorize you to use this stuff, it's me, because I believe a murder was committed in it. So you just keep doing what you've been doing."

"That's not much of a commitment," she mused.

"It's all you're going to get. Now, what else have you got?"

She turned to her keyboard and typed for a while. Pretty soon a printer started, and Lisa leaned back. I glanced at her screen. It said: osculate posterior-p. I remembered that oscu-late meant kiss. Well, these people have their own language. Lisa looked up at me and grinned.

"Not you," she said, quietly. "*Him*."

I hadn't the faintest notion of what she was talking about.

Osborne got his printout and was ready to leave. Again, he couldn't resist turning at the door for final orders.

"If you find anything to indicate he didn't commit suicide, let me know."

"Okay. He didn't commit suicide."

Osborne didn't understand for a moment.

"I want proof."

"Well, I have it, but you probably can't use it. He didn't write that ridiculous suicide note."

"How do you know that?"

"I knew that my first day here. I had the computer list the program. Then I compared it to Kluge's style. No *way* he could have written it. It's tighter'n a bug's ass. Not a spare line in it. Kluge didn't pick his alias for nothing. You know what it means?"

"Clever," I said.

"Literally. But it means... a Rube Goldberg device.

Something overly complex. Something that works, but for the wrong reason. You 'kluge around' bugs in a program. It's the hacker's vaseline."

"So?" Osborne wanted to know.

"So Kluge's programs were really crooked. They were full of bells and whistles he never bothered to clean out. He was a genius, and his programs worked, but you wonder why they did. Routines so bletcherous they'd make your skin crawl. Real crafty bagbiters. But good programming's so rare, even his diddles were better than most people's super-moby hacks."

I suspect Osborne understood about as much of that as I did.

"So you base your opinion on his programming style."

"Yeah. Unfortunately, it's gonna be ten years or so before that's admissible in court, like graphology or fingerprints. But if you know anything about programming you can look at it and see it. Somebody else wrote that suicide note—somebody damn good, by the way. That program called up his last will and testament as a sub-routine. And he definitely *did* write that. It's got his fingerprints all over it. He spent the last five years spying on the neighbors as a hobby. He tapped into military records, school records, work records, tax files and bank accounts. And he turned every telephone for three blocks into a listening device. He was one hell of a snoop."

"Did he mention anywhere why he did that?" Osborne asked.

"I think he was more than half crazy. Possibly he was suicidal. He sure wasn't doing himself any good with all those pills he took. But he was preparing himself for death, and Victor was the only one he found worthy of leaving it all to. I'd have *believed* he committed suicide if not for that note. But he didn't write it. I'll swear to that."

We eventually got rid of him, and I went home to fix the dinner. Lisa joined me when it was ready. Once more she had a huge appetite.

I fixed lemonade and we sat on my small patio and watched evening gather around us.

I woke up in the middle of the night, sweating. I sat up, thinking it out, and I didn't like my conclusions. So I put on my robe and slippers and went over to Kluge's.

The front door was open again. I knocked anyway. Lisa stuck her head around the corner.

"Victor? Is something wrong?"

"I'm not sure," I said. "May I come in?"

She gestured, and I followed her into the living room. An open can of Pepsi sat beside her console. Her eyes were red as she sat on her bench.

"What's up?" she said, and yawned.

"You should be asleep, for one thing," I said.

She shrugged, and nodded.

"Yeah. I can't seem to get in the right phase. Just now I'm in day mode. But Victor, I'm used to working odd hours, and long hours, and you didn't come over here to lecture me about that, did you?"

"No. You say Kluge was murdered."

"He didn't write his suicide note. That seems to leave murder."

"I was wondering why someone would kill him. He never left the house, so it was for something he

did here with his computers. And now you're... well, I don't know *what* you're doing, frankly, but you seem to be poking into the same things. Isn't there a danger the same people will come after you?"

"People?" She raised an eyebrow.

I felt helpless. My fears were not well-formed enough to make sense.

"I don't know... you mentioned agencies..."

"You notice how impressed Osborne was with that? You think there's some kind of conspiracy Kluge tumbled to, or you think the CIA killed him because he found out too much about something, or—"

"I don't know, Lisa. But I'm worried the same thing could happen to you." †

Surprisingly, she smiled at me.

"Thank you so much, Victor. I wasn't going to admit it to Osborne, but I've been worried about that, too."

"Well, what are you going to do?"

"I want to stay here and keep working. So I gave some thought to what I could do to protect myself. I decided there wasn't anything."

"Surely there's something."

"Well, I got a gun, if that's what you mean. But think about it. Kluge was offed in the middle of the day. Nobody saw anybody enter or leave the house. So I asked myself, who can walk into a house in broad daylight, shoot Kluge, program that suicide note, and walk away, leaving no traces he'd ever been there?"

"Somebody very good."

"Goddam good. So good there's not much chance one little gook's gonna be able to stop him if he decides to waste her."

She shocked me, both by her words and by her apparent lack of concern for her own fate. But she had said she was worried.

"Then you have to stop this. Get out of here."

"I won't be pushed around that way," she said. There was a tone of finality to it. I thought of things I might say, and rejected them all.

"You could at least... lock your front door," I con-cluded, lamely.

She laughed, and kissed my cheek.

"I'll do that, Yank. And I appreciate your concern. I really do."

I watched her close the door behind me, listened to her lock it, then trudged through the moonlight toward my house. Halfway there I stopped. I could suggest she stay in my spare bedroom. I could offer to stay with her at Kluge's.

No, I decided. She would probably take that the wrong way.

I was back in bed before I realized, with a touch of chagrin and more than a little disgust at myself, that she had every reason to take it the wrong way.

And me exactly twice her age.

I spent the morning in the garden, planning the evening's menu. I have always liked to cook, but dinner with Lisa had rapidly become the high point of my day. Not only that, I was already taking it for granted. So it hit me hard, around noon, when I looked out the front and saw her car gone.

I hurried to Kluge's front door. It was standing open. I made a quick search of the house. I found nothing until the master bedroom, where her clothes were stacked neatly on the floor.

Shivering, I pounded on the Laniers' front door. Betty answered, and immediately saw my agitation.

"The girl at Kluge's house," I said. "I'm afraid some-thing's wrong. Maybe we'd better call the police."

"What happened?" Betty asked, looking over my shoul-der. "Did she call you? I see she's not back yet."

"Back?"

"I saw her drive away about an hour ago. That's quite a car she has."

Feeling like a fool, I tried to make nothing of it, but I caught a look in Betty's eye. I think she'd have liked to pat me on the head. It made me furious.

But she'd left her clothes, so surely she was coming back.

I kept telling myself that, then went to run a bath, as hot as I could stand it.

When I answered the door she was standing there with a grocery bag in each arm and her usual blinding smile on her face.

"I wanted to do this yesterday but I forgot until you came over, and I know I should have asked first, but then I wanted to surprise you, so I just went to get one or two items you didn't have in your garden and a couple of things that weren't in your spice rack..."

She kept talking as we unloaded the bags in the kitchen. I said nothing. She was wearing a new T-shirt. There was a big V, and under it a picture of a screw, followed by a hyphen and a small case "p." I thought it over as she babbled on. V, screw-p. I was determined not to ask what it meant.

"Do you like Vietnamese cooking?"

I looked at her, and finally realized she was very nervous.

"I don't know," I said. "I've never had it. But I like Chinese, and Japanese, and Indian. I like to try new things." The last part was a lie, but not as bad as it might have been. I do try new recipes, and my tastes in food are catholic. I didn't expect to have much trouble with southeast Asian cuisine.

"Well, when I get through you *still* won't know," she laughed. "My momma was half-Chinese. So what you're gonna get here is a mongrel meal." She glanced up, saw my face, and laughed.

"I forgot. You've been to Asia. No, Yank, I ain't gonna serve any dog meat."

\* \* \*

There was only one intolerable thing, and that was the chopsticks. I used them for as long as I could, then put them aside and got a fork.

"I'm sorry," I said. "Chopsticks happen to be a problem for me."

"You use them very well."

"I had plenty of time to learn how."

It was very good, and I told her so. Each dish was a revelation, not quite like anything I had ever had. Toward the end, I broke down halfway.

"Does the V stand for victory?" I asked.

"Maybe."

"Beethoven? Churchill? World War Two?"

She just smiled.

"Think of it as a challenge, Yank."

"Do I frighten you, Victor?"

"You did at first."

"It's my face, isn't it?"

"It's a generalized phobia of Orientals. I suppose I'm a racist. Not because I want to be."

She nodded slowly, there in the dark. We were on the patio again, but the sun had gone down a long time ago. I can't recall what we had talked about for all those hours. It had kept us busy, anyway.

"I have the same problem," she said.

"Fear of Orientals?" I had meant it as a joke.

"Of Cambodians." She let me take that in for a while, then went on. "When Saigon fell, I fled to Cambodia. It took me two years with stops when the Khmer Rouge put me in labor camps. I'm lucky to be alive, really."

"I thought they called it Kampuchea now."

She spat. I'm not even sure she was aware she had done it.

"It's the People's Republic of Syphilitic Dogs. The North Koreans treated you very badly, didn't they, Victor?"

"That's right."

"Koreans are pus suckers." I must have looked surprised, because she chuckled.

"You Americans feel so guilty about racism. As if you had invented it and nobody else—except maybe the South Afri-cans and the Nazis—had ever practiced it as heinously as you. And you can't tell one yellow face from another, so you think of the yellow races as one homogeneous block. When in fact Orientals are among the most racist peoples on the earth. The Vietnamese have hated the Cambodians for a thousand years. The Chinese hate the Japanese. The Koreans hate everybody. And *everybody* hates the 'ethnic Chinese.' The Chinese are the Jews of the east."

"I've heard that."

She nodded, lost in her own thoughts.

"And I hate all Cambodians," she said, at last. "Like you, I don't wish to. Most of the people who suffered in the camps were Cambodians. It was the genocidal leaders, the Pol Pot scum, who I should hate." She looked at me. "But some-times we don't get a lot of choice about things like that, do we, Yank?"

The next day I visited her at noon. It had cooled down, but was still warm in her dark den. She had not changed her shirt.

She told me a few things about computers. When she let me try some things on the keyboard I quickly got lost. We decided I needn't plan on a career as a computer programmer.

One of the things she showed me was called a telephone modem, whereby she could reach other computers all over the world. She "interfaced" with someone at Stanford who she had never met, and who she knew only as "Bubble Sorter." They typed things back and forth at each other.

At the end, Bubble Sorter wrote "bye-p." Lisa typed T.

"What's T?" I asked.

"True. Means yes, but yes would be too straightforward for a hacker."

"You told me what a byte is. What's a byep?"

She looked up at me seriously.

"It's a question. Add p to a word, and make it a question. So bye-p means Bubble Sorter was asking if I wanted to log out. Sign off."

I thought that over.

"So how would you translate 'osculate posterior-p'?"

" 'You wanna kiss my ass?' But remember, that was for Osborne."

I looked at her T-shirt again, then up to her eyes, which were quite serious and serene. She waited, hands folded in her lap.

Intercourse-p.

"Yes," I said. "I would."

She put her glasses on the table and pulled her shirt over her head.

We made love in Kluge's big waterbed.

I had a certain amount of performance anxiety—it had been a long, *long* time. After that, I was so caught up in the touch and smell and taste of her that I went a little crazy. She didn't seem to mind.

At last we were done, and bathed in sweat. She rolled over, stood, and went to the window. She opened it, and a breath of air blew over me. Then she put one knee on the bed, leaned over me, and got a pack of cigarettes from the bedside table. She lit one.

"I hope you're not allergic to smoke," she said.

"No. My father smoked. But I didn't know you did."

"Only afterwards," she said, with a quick smile. She took a deep drag. "Everybody in Saigon smoked, I think." She stretched out on her back beside me and we lay like that, soaking wet, holding hands. She opened her legs so one of her bare feet touched mine. It seemed enough contact. I watched the smoke rise from her right hand.

"I haven't felt warm in thirty years," I said. "I've been hot, but I've never been warm. I feel warm now."

"Tell me about it," she said.

So I did, as much as I could, wondering if it would work this time. At thirty years remove, my story does not sound so horrible. We've seen so much in that time. There were people in jails at that very moment, enduring conditions as bad as any I encountered. The paraphernalia of oppression is still pretty much the same. Nothing physical happened to me that would account for thirty years lived as a recluse.

"I *was* badly injured," I told her. "My skull was frac-tured, I still have... problems from that. Korea can get very cold, and I was never warm enough. But it was the other stuff. What they call brainwashing now."

"We didn't know what it was. We couldn't understand that even after a man had told them all he knew they'd keep on at us. Keeping us awake. Disorienting us. Some guys signed confessions, made up all sorts of stuff, but even that wasn't enough. They'd just keep on at you."

"I never did figure it out. I guess I couldn't understand an evil that big. But when they were sending us back and some of the prisoners wouldn't go... they really didn't *want* to go, they really believed..."

I had to pause there. Lisa sat up, moved quietly to the end of the bed, and began massaging my feet.



"We got a taste of what the Vietnam guys got, later. Only for us it was reversed. The GJ.'s were heroes, and the prisoners were..."

"You didn't break," she said. It wasn't a question.

"No, I didn't."

"That would be worse."

I looked at her. She had my foot pressed against her flat belly, holding me by the heel while her other hand massaged my toes.

"The country was shocked," I said. "They didn't understand what brainwashing was. I tried telling people how it was. I thought they were looking at me funny. After a while, I stopped talking about it. And I didn't have anything else to talk about."

"A few years back the Army changed its policy. Now they don't expect you to withstand psychological conditioning. It's understood you can say anything or sign anything."

She just looked at me, kept massaging my foot, and nodded slowly. Finally she spoke.

"Cambodia was hot," she said. "I kept telling myself when I finally got to the U.S. I'd live in Maine or someplace, where it snowed. And I did go to Cambridge, but I found out I didn't like snow."

She told me about it. The last I heard, a million people had died over there. It was a whole country frothing at the mouth and snapping at anything that moved. Or like one of those sharks you read about that, when its guts are ripped out, bends in a circle and starts devouring itself.

She told me about being forced to build a pyramid of severed heads. Twenty of them working all day in the hot sun finally got it ten feet high before it collapsed. If any of them stopped working, their own heads were added to the pile.

"It didn't mean anything to me. It was just another job. I was pretty crazy by then. I didn't start to come out of it until I got across the Thai border."

That she had survived it at all seemed a miracle. She had gone through more horror than I could imagine. And she had come through it in much better shape. It made me feel small. When I was her age, I was well on my way to building the prison I have lived in ever since. I told her that.

"Part of it is preparation," she said, wryly. "What you expect out of life, what your life has been so far. You said it yourself. Korea was new to you. I'm not saying I was ready for Cambodia, but my life up to that point hadn't been what you'd call sheltered. I hope you haven't been thinking I made a living in the streets by selling apples."

She kept rubbing my feet, staring off into scenes I could not see.

"How old were you when your mother died?"

"She was killed during Tet, 1968. I was ten."

"By the Viet Cong?"

"Who knows? Lot of bullets flying, lot of grenades being thrown."

She sighed, dropped my foot, and sat there, a scrawny Buddha without a robe.

"You ready to do it again, Yank?"

"I don't think I can, Lisa. I'm an old man."

She moved over me and lowered herself with her chin just below my sternum, settling her breasts in the most delicious place possible.

"We'll see," she said, and giggled. "There's an alternative sex act I'm pretty good at, and I'm pretty

sure it would make you a young man again. But I haven't been able to do it for about a year on account of these." She tapped her braces. "It'd be sort of like sticking it in a buzz saw. So now I do this instead. I call it 'touring the silicone valley.'" She started moving her body up and down, just a few inches at a time. She blinked innocently a couple times, then laughed.

"At last, I can see you," she said. "I'm awfully myopic."

I let her do that for a while, then lifted my head.

"Did you say silicone?"

"Uh-huh. You didn't think they were real, did you?"

I confessed that I had.

"I don't think I've ever been so happy with anything I ever bought. Not even the car."

"Why did you?"

"Does it bother you?"

It didn't, and I told her so. But I couldn't conceal my curiosity.

"Because it was safe to. In Saigon I was always angry that I never developed. I could have made a good living as a prostitute, but I was always too tall, too skinny, and too ugly. Then in Cambodia I was lucky. I managed to pass for a boy some of the time. If not for that I'd have been raped a lot more than I was. And in Thailand I knew I'd get to the West one way or another, and when I got there, I'd get the best car there was, eat anything I wanted any time I wanted to, and purchase the best tits money could buy. You can't imagine what the West looks like from the camps. A place where you can buy tits!"

She looked down between them, then back at my face.

"Looks like it was a good investment," she said.

"They do seem to work okay," I had to admit.

We agreed that she would spend the nights at my house. There were certain things she had to do at Kluge's, involving equipment that had to be physically loaded, but many things she could do with a remote terminal and an armload of software. So we selected one of Kluge's best computers and about a dozen peripherals and installed her at a cafeteria table in my bedroom.

I guess we both knew it wasn't much protection if the people who got Kluge decided to get her. But I know I felt better about it, and I think she did, too.

The second day she was there a delivery van pulled up outside, and two guys started unloading a king-size waterbed. She laughed and laughed when she saw my face.

"Listen, you're not using Kluge's computers to—"

"Relax, Yank. How'd you think I could afford a Ferrari?"

"I've been curious."

"If you're really good at writing software you can make a lot of money. I own my own company. But every hacker picks up tricks here and there. I used to run a few Kluge scams, myself."

"But not anymore?"

She shrugged. "Once a thief, always a thief, Victor. I told you I couldn't make ends meet selling my bod."

Lisa didn't need much sleep.

We got up at seven, and I made breakfast every morning. Then we would spend an hour or two

working in the garden.

She would go to Kluge's and I'd bring her a sandwich at noon, then drop in on her several times during the day. That was for my own peace of mind; I never stayed more than a minute. Sometime during the afternoon I would shop or do household chores, then at seven one of us would cook dinner. We alternated. I taught her "American" cooking, and she taught me a little of everything. She complained about the lack of vital ingredients in American markets. No dogs, of course, but she claimed to know great ways of preparing monkey, snake, and rat. I never knew how hard she was pulling my leg, and didn't ask.

After dinner she stayed at my house. We would talk, make love, bathe.

She loved my tub. It is about the only alteration I have made in the house, and my only real luxury. I put it in—having to expand the bathroom to do so—in 1975, and never regretted it. We would soak for twenty minutes or an hour, turning the jets and bubblers on and off, washing each other; giggling like kids. Once we used bubble bath and made a mountain of suds four feet high, then destroyed it, splashing water all over the place. Most nights she let me wash her long black hair.

She didn't have any bad habits—or at least none that clashed with mine. She was neat and clean, changing her clothes twice a day and never so much as leaving a dirty glass on the sink. She never left a mess in the bathroom. Two glasses of wine was her limit.

I felt like Lazarus.

Osborne came by three times in the next two weeks. Lisa met him at Kluge's and gave him what she had learned. It was getting to be quite a list.

"Kluge once had an account in a New York bank with nine *trillion* dollars in it," she told me after one of Osborne's visits. "I think he did it just to see if he could. He left it in for one day, took the interest and fed it to a bank in the Bahamas, then destroyed the principal. Which never existed anyway."

In return, Osborne told her what was new on the murder investigation—which was nothing—and on the status of Kluge's property, which was chaotic. Various agencies had sent people out to look the place over. Some FBI men came, wanting to take over the investigation. Lisa, when talking about computers, had the power to cloud men's minds. She did it first by explaining exactly what she was doing, in terms so abstruse that no one could understand her. Sometimes that was enough. If it wasn't, if they started to get tough, she just moved out of the driver's seat and let them try to handle Kluge's contraption. She let them watch in horror as dragons leaped out of nowhere and ate up all the data on a disc, then printed "You Stupid Putz!" on the screen.

"I'm cheating them," she confessed to me. "I'm giving them stuff I *know* they're gonna step in, because I already stepped in it myself. I've lost about forty percent of the data Kluge had stored away. But the others lose a hundred per-cent. You ought to see their faces when Kluge drops a logic bomb into their work. That second guy threw a three thousand dollar printer clear across the room. Then tried to bribe me to be quiet about it."

When some federal agency sent out an expert from Stanford, and he seemed perfectly content to destroy everything in sight in the firm belief that he was *bound* to get it right sooner or later, Lisa showed him how Kluge entered the IRS main computer in Washington and neglected to mention how Kluge had gotten out. The guy tangled with some watchdog program. During his struggles, it seemed he had erased all the tax records from the letter S down into the W's. Lisa let him think that for half an hour.

"I thought he was having a heart attack," she told me. "All the blood drained out of his face and he couldn't talk. So I showed him where I had—with my usual foresight—arranged for that data to be recorded, told him how to put it back where he found it, and how to pacify the watchdog. He couldn't get out of that house fast enough. Pretty soon he's gonna realize you *can't* destroy that much information with anything short of dynamite because of the backups and the limits of how much can be running at any

one time. But I don't think he'll be back."

"It sounds like a very fancy video game," I said.

"It is, in a way. But it's more like Dungeons and Dragons. It's an endless series of closed rooms with dangers on the other side. You don't dare take it a step at a time. You take it a *hundredth* of a step at a time. Your questions are like, 'Now this isn't a question, but if it entered my mind to *ask*

this question—which I'm not about to do—concerning what might happen if I looked at this door here—and I'm not touching it, I'm not even in the next room—what do you suppose you might do?' And the program crunches on that, decides if you fulfilled the conditions for getting a great big cream pie in the face, then either throws it or allows as how it *might* just move from step A to step A Prime. Then you say, 'Well, maybe I *am* looking at that door.' And sometimes the program says 'You looked, you looked, you dirty crook!' And the fireworks start."

Silly as all that sounds, it was very close to the best explanation she was ever able to give me about what she was doing.

"Are you telling everything, Lisa?" I asked her.

"Well, not everything. I didn't mention the four cents."

Four cents? Oh my god.

"Lisa, I didn't want that, I didn't ask for it, I wish he'd never—"

"Calm down, Yank. It's going to be all right."

"He kept records of all that, didn't he?"

"That's what I spend most of my time doing. Decoding his records."

"How long have you known?"

"About the seven hundred thousand dollars? It was in the first disc I cracked."

"I just want to give it back."

She thought that over, and shook her head.

"Victor, it'd be more dangerous to get rid of it now than it would be to keep it. It was imaginary money at first. But now it's got a history. The IRS thinks it knows where it came from. The taxes are paid on it. The State of Delaware is convinced that a legally chartered corporation disbursed it. An Illinois law firm has been paid for handling it. Your bank has been paying you interest on it. I'm not saying it would be impossible to go back and wipe all that out, but I wouldn't like to try. I'm good, but I don't have Kluge's touch."

"How could he *do* all that? You say it was imaginary money. That's not the way I thought money worked. He could just pull it out of thin air?"

Lisa patted the top of her computer console, and smiled at me.

"This is money, Yank," she said, and her eyes glittered.

\* \* \*

At night she worked by candlelight so she wouldn't disturb me. That turned out to be my downfall. She typed by touch, and needed the candle only to locate software.

So that's how I'd go to sleep every night, looking at her slender body bathed in the glow of the candle. I was always reminded of melting butter dripping down a roasted ear of corn. Golden light on golden skin.

Ugly, she had called herself. Skinny. It was true she was thin. I could see her ribs when she sat with

her back impossibly straight, her tummy sucked in, her chin up. She worked in the nude these days, sitting in lotus position. For long periods she would not move, her hands lying on her thighs, then she would poise, as if to pound the keys. But her touch was light, almost silent. It looked more like yoga than programming. She said she went into a meditative state for her best work.

I had expected a bony angularity, all sharp elbows and knees. She wasn't like that. I had guessed her weight ten pounds too low, and still didn't know where she put it. But she was soft and rounded, and strong beneath.

No one was ever going to call her face glamorous. Few would even go so far as to call her pretty. The braces did that, I think. They caught the eye and held it, drawing attention to that unsightly jumble.

But her skin was wonderful. She had scars. Not as many as I had Expected. She seemed to heal quickly, and well.

I thought she was beautiful.

I had just completed my nightly survey when my eye was caught by the candle. I looked at it, then tried to look away.

Candles do that sometimes. I don't know why. In still air, with the flame perfectly vertical, they begin to flicker. The flame leaps up then squats down, up and down, up and down, brighter and brighter in regular rhythm, two or three beats to the second—

—and I tried to call out to her, wishing the candle would stop its regular flickering, but already I couldn't speak—

—I could only gasp, and I tried once more, as hard as I could, to yell, to scream, to tell her not to worry, and felt the nausea building...

\* \* \*

I tasted blood. I took an experimental breath, did not find the smells of vomit, urine, feces. The overhead lights were on.

Lisa was on her hands and knees leaning over me, her face very close. A tear dropped on my forehead. I was on the carpet, on my back.

"Victor, can you hear me?"

I nodded. There was a spoon in my mouth. I spat it out.

"What happened? Are you going to be all right?"

I nodded again, and struggled to speak.

"You just lie there. The ambulance is on its way."

"No. Don't need it."

"Well, it's on its way. You just take it easy and—"

"Help me up."

"Not yet. You're not ready."

She was right. I tried to sit up, and fell back quickly. I took deep breaths for a while. Then the doorbell rang.

She stood up and started to the door. I just managed to get my hand around her ankle. Then she was leaning over me again, her eyes as wide as they would go.

"What is it? What's wrong now?"

"Get some clothes on," I told her. She looked down at herself, surprised.

"Oh. Right."

She got rid of the ambulance crew. Lisa was a lot calmer after she made coffee and we were sitting at the kitchen table. It was one o'clock, and I was still pretty rocky. But it hadn't been a bad one.

I went to the bathroom and got the bottle of Dilantin I'd hidden when she moved in. I let her see me take one.

"I forgot to do this today," I told her.

"It's because you hid them. That was stupid."

"I know." There must have been something else I could have said. It didn't please me to see her look hurt. But she was hurt because I wasn't defending myself against her attack, and that was a bit too complicated for me to dope out just after a grand mal.

"You can move out if you want to," I said. I was in rare form.

So was she. She reached across the table and shook me by the shoulders. She glared at me.

"I won't take a lot more of that kind of shit," she said, and I nodded, and began to cry.

She let me do it. I think that was probably best. She could have babied me, but I do a pretty good job of that myself.

"How long has this been going on?" she finally said. "Is that why you've stayed in your house for thirty years?"

I shrugged. "I guess it's part of it. When I got back they operated, but it just made it worse."

"Okay. I'm mad at you because you didn't tell me about it, so I didn't know what to do. I want to stay, but you'll have to tell me how. Then I won't be mad anymore."

I could have blown the whole thing right there. I'm amazed I didn't. Through the years I'd developed very good methods for doing things like that. But I pulled through when I saw her face. She really did want to stay. I didn't know why, but it was enough.

"The spoon was a mistake," I said. "If there's time, and if you can do it without risking your fingers, you could jam a piece of cloth in there. Part of a sheet, or something. But nothing hard." I explored my mouth with a finger. "I think I broke a tooth."

"Serves you right," she said. I looked at her, and smiled, then we were both laughing. She came around the table and kissed me, then sat on my knee.

"The biggest danger is drowning. During the first part of the seizure, all my muscles go rigid. That doesn't last long. Then they all start contracting and relaxing at random. It's *very* strong."

"I know. I watched, and I tried to hold you."

"Don't do that. Get me on my side. Stay behind me, and watch out for flailing arms. Get a pillow under my head if you can. Keep me away from things I could injure myself on." I looked her square in the eye. "I want to emphasize this. Just *try* to do all those things. If I'm getting too violent, it's better you stand off to the side. Better for both of us. If I knock you out, you won't be able to help me if I start strangling on vomit."

I kept looking at her eyes. She must have read my mind, because she smiled slightly.

"Sorry, Yank, I am not freaked out. I mean, like, it's totally gross, you know, and it barfs me out to the max, you could—"

"—gag me with a spoon, I know. Okay, right, I know I was dumb. And that's about it. I might bite

my tongue or the inside of my cheek. Don't worry about it. There is one more thing."

She waited, and I wondered how much to tell her. There wasn't a lot she could do, but if I died on her I didn't want her to feel it was her fault.

"Sometimes I have to go to the hospital. Sometimes one seizure will follow another. If that keeps up for too long, I won't breathe, and my brain will die of oxygen starvation."

"That only takes about five minutes," she said, alarmed.

"I know. It's only a problem if I start having them frequently, so we could plan for it if I do. But if I don't come out of one, start having another right on the heels of the first, or if you can't detect any breathing for three or four minutes, you'd better call an ambulance."

"Three or four minutes? You'd be dead before they got here."

"It's that or live in a hospital. I don't like hospitals."

"Neither do I."

The next day she took me for a ride in her Ferrari. I was nervous about it, wondering if she was going to do crazy things. If anything, she was too slow. People behind her kept honking. I could tell she hadn't been driving long from the exaggerated attention she put into every movement.

"A Ferrari is wasted on me, I'm afraid," she confessed at one point. "I never drive it faster than fifty-five."

We went to an interior decorator in Beverly Hills and she bought a low-watt gooseneck lamp at an outrageous price.

I had a hard time getting to sleep that night. I suppose I was afraid of having another seizure, though Lisa's new lamp wasn't going to set it off.

Funny about seizures. When I first started having them, everyone called them fits. Then, gradually, it was seizures, until fits began to sound dirty.

I guess it's a sign of growing old, when the language changes on you.

There were rafts of new words. A lot of them were for things that didn't even exist when I was growing up. Like software. I always visualized a limp wrench.

"What got you interested in computers, Lisa?" I asked her.

She didn't move. Her concentration when sitting at the machine was pretty damn good. I rolled onto my back and tried to sleep.

"It's where the power is, Yank." I looked up. She had turned to face me.

"Did you pick it all up since you got to America?"

"I had a head start. I didn't tell you about my Captain, did I?"

"I don't think you did."

"He was strange. I knew that. I was about fourteen. He was an American, and he took an interest in me. He got me a nice apartment in Saigon. And he put me in school."

She was studying me, looking for a reaction. I didn't give her one.

"He was surely a pedophile, and probably had homosexual tendencies, since I looked so much like a skinny little boy."

Again the wait. This time she smiled.

"He was good to me. I learned to read well. From there on, anything is possible."

"I didn't actually ask you about your Captain. I asked why you got interested in computers."

"That's right. You did."

"Is it just a living?"

"It started that way. It's the future, Victor."

"God knows I've read that enough times."

"It's true. It's already here. It's power, if you know how to use it. You've seen what Kluge was able to do. You can make money with one of these things. I don't mean earn it, I mean *make* it, like if you had a printing press. Remember Osborne mentioned that Kluge's house didn't exist? Did you think what that means?"

"That he wiped it out of the memory banks."

"That was the first step. But the lot exists in the county plat books, wouldn't you think? I mean, this country hasn't *entirely* given up paper."

"So the county really does have a record of that house."

"No. That page was torn out of the records."

"I don't get it. Kluge never left the house."

"Oldest way in the world, friend. Kluge looked through the L.A.P.D. files until he found a guy known as Sammy. He sent him a cashier's check for a thousand dollars, along with a letter saying he could earn twice that if he'd go to the hall of records and do something. Sammy didn't bite, and neither did McGee, or Molly Unger. But Little Billy Phipps did, and he got a check just like the letter said, and he and Kluge had a wonderful business relationship for many years. Little Billy drives a new Cadillac now, and hasn't the faintest notion who Kluge was or where he lived. It didn't matter to Kluge how much he spent. He just pulled it out of thin air."

I thought that over for a while. I guess it's true that with enough money you can do just about anything, and Kluge had all the money in the world.

"Did you tell Osborne about Little Billy?"

"I erased that disc, just like I erased your seven hundred thousand. You never know when you might need somebody like Little Billy."

"You're not afraid of getting into trouble over it?"

"Life is risk, Victor. I'm keeping the best stuff for myself. Not because I intend to use it, but because if I ever needed it badly and didn't have it, I'd feel like such a fool."

She cocked her head and narrowed her eyes, which made them practically disappear.

"Tell me something, Yank. Kluge picked you out of all your neighbors because you'd been a Boy Scout for thirty years. How do you react to what I'm doing?"

"You're cheerfully amoral, and you're a survivor, and you're basically decent. And I pity anybody who gets in your way."

She grinned, stretched, and stood up.

"'Cheerfully amoral.' I like that." She sat beside me, making a great sloshing in the bed. "You want to be amoral again?"

"In a little bit." She started rubbing my chest. "So you got into computers because they were the wave of the future. Don't you ever worry about them... I don't know, I guess it sounds corny... do you think they'll take over?"



"Everybody thinks that until they start to use them," she said. "You've got to realize just how stupid they are. Without programming they are good for nothing, literally. Now, what I do believe is that the people who *run* the computers will take over. They already have. That's why I study them."

"I guess that's not what I meant. Maybe I can't say it right."

She frowned. "Kluge was looking into something. He'd been eavesdropping in artificial intelligence labs, and reading a lot of neurological research. I think he was trying to find a common thread."

"Between human brains and computers?"

"Not quite. He was thinking of computers and neurons. Brain cells." She pointed to her computer. "That thing, or any other computer, is light-years away from being a human brain. It can't generalize, or infer, or categorize, or invent. With good programming it can appear to do some of those things, but it's an illusion."

"There's an old speculation about what would happen if we finally built a computer with as many transistors as the human brain has neurons. Would there be a self-awareness? I think that's baloney. A transistor isn't a neuron, and a quintillion of them aren't any better than a dozen."

"So Kluge—who seems to have felt the same way—started looking into the possible similarities between a neuron and an 8-bit computer. That's why he had all that consumer junk sitting around his house, those Trash-80's and Atari's and TI's and Sinclair's, for chrissake. He was used to *much* more powerful instruments. He ate up the home units like candy."

"What did he find out?"

"Nothing, it looks like. An 8-bit unit is more complex than a neuron, and no computer is in the same galaxy as an organic brain. But see, the words get tricky. I said an Atari is more complex than a neuron, but it's hard to really compare them. It's like comparing a direction with a distance, or a color with a mass. The units are different. Except for one similarity."

"What's that?"

"The connections. Again, it's different, but the concept of networking is the same. A neuron is connected to a lot of others. There are trillions of them, and the way messages pulse through them determines what we are and what we think and what we remember. And with that computer I can reach a million others. It's bigger than the human brain, really, because the information in that network is more than all humanity could cope with in a million years. It reaches from Pioneer Ten, out beyond the orbit of Pluto, right into every living room that has a telephone in it. With that computer you can tap tons of data that has been collected but nobody's even had the time to look at."

"That's what Kluge was interested in. The old 'critical mass computer' idea, the computer that becomes aware, but with a new angle. Maybe it wouldn't be the size of the computer, but the *number* of computers. There used to be thousands of them. Now there's millions. They're putting them in cars. In wristwatches. Every home has several, from the simple timer on a microwave oven up to a video game or home terminal. Kluge was trying to find out if critical mass could be reached that way."

"What did he think?"

"I don't know. He was just getting started." She glanced down at me. "But you know what, Yank? I think you've reached critical mass while I wasn't looking."

"I think you're right." I reached for her.

Lisa liked to cuddle. I didn't, at first, after fifty years of sleeping alone. But I got to like it pretty quickly.

That's what we were doing when we resumed the conversation we had been having. We just lay in

each other's arms and talked about things. Nobody had mentioned love yet, but I knew I loved her. I didn't know what to do about it, but I would think of something.

"Critical mass," I said. She nuzzled my neck, and yawned.

"What about it?"

"What would it be like? It seems like it would be such a vast intelligence. So quick, so omniscient. God-like."

"Could be."

"Wouldn't it... run our lives? I guess I'm asking the same questions I started off with. Would it take over?"

She thought about it for a long time.

"I wonder if there would be anything to take over. I mean, why should it care? How could we figure what its concerns would be? Would it want to be worshipped, for instance? I doubt it. Would it want to 'rationalize all human behavior, to eliminate all emotion,' as I'm sure some sci-fi film computer must have told some damsel in distress in the 'fifties.

"You can use a word like awareness, but what does it mean? An amoeba must be aware. Plants probably are. There may be a level of awareness in a neuron. Even in an inte-grated circuit chip. We don't even know what our own aware-ness really is. We've never been able to shine a light on it, dissect it, figure out where it comes from or where it goes when we're dead. To apply human values to a thing like this hypothetical computer-net consciousness would be pretty stu-pid. But I don't see how it could interact with human aware-ness at all. It might not even notice us, any more than we notice cells in our bodies, or neutrinos passing through us, or the vibrations of the atoms in the air around us."

So she had to explain what a neutrino was. One thing I always provided her with was an ignorant audience. And after that, I pretty much forgot about our mythical hyper-computer.

"What about your Captain?" I asked, much later.

"Do you really want to know, Yank?" she mumbled, sleepily.

"I'm not afraid to know."

She sat up and reached for her cigarettes. I had come to know she sometimes smoked them in times of stress. She had told me she smoked after making love, but that first time had been the only time. The lighter flared in the dark. I heard her exhale.

"My Major, actually. He got a promotion. Do you want to know his name?"

"Lisa, I don't want to know any of it if you don't want to tell it. But if you do, what I want to know is did he stand by you."

"He didn't marry me, if that's what you mean. When he knew he had to go, he said he would, but I talked him out of it. Maybe it was the most noble thing I ever did. Maybe it was the most stupid.

"It's no accident I look Japanese. My grandmother was raped in '42 by a Jap soldier of the occupation. She was Chinese, living in Hanoi. My mother was born there. They went south after Dien Bien Phu. My grandmother died. My mother had it hard. Being Chinese was tough enough, but being half Chinese and half Japanese was worse. My father was half French and half Annamese. Another bad combina-tion. I never knew him. But I'm sort of a capsule history of Vietnam."

The end of her cigarette glowed brighter once more.

"I've got one grandfather's face and the other grandfa-ther's height. With tits by Goodyear. About all I missed was some American genes, but I was working on that for my children.

"When Saigon was falling I tried to get to the American Embassy. Didn't make it. You know the rest, until I got to Thailand, and when I finally got Americans to notice me, it turned out my Major was still looking for me. He sponsored me over here, and I made it in time to watch him die of cancer. Two months I had with him, all of it in the hospital."

"My god." I had a horrible thought. "That wasn't the war, too, was it? I mean, the story of your life—"

"—is the rape of Asia. No, Victor. Not that war, anyway. But he was one of those guys who got to see atom bombs up close, out in Nevada. He was too Regular Army to complain about it. but I think he knew that's what killed him."

"Did you love him?"

"What do you want me to say? He got me out of hell."

Again the cigarette flared, and I saw her stub it out.

"No," she said. "I didn't love him. He knew that. I've never loved anybody. He was very dear, very special to me. I would have done almost anything for him. He was fatherly to me." I felt her looking at me in the dark. "Aren't you going to ask how old he was?"

"Fiftyish," I said.

"On the nose. Can I ask you something?"

"I guess it's your turn."

"How many girls have you had since you got back from Korea?"

I held up my hand and pretended to count on my fingers.

"One," I said, at last.

"How many before you went?"

"One. We broke up before I left for the war."

"How many in Korea?"

"Nine. All at Madame Park's jolly little whorehouse in Pusan."

"So you've made love to one white and ten Asians. I bet none of the others were as tall as me."

"Korean girls have fatter cheeks, too. But they all had your eyes."

She nuzzled against my chest, took a deep breath, and sighed.

"We're a hell of a pair, aren't we?"

I hugged her, and her breath came again, hot on my chest.

I wondered how I'd lived so long without such a simple miracle as that.

"Yes. I think we really are."

Osborne came by again about a week later. He seemed subdued. He listened to the things Lisa had decided to give him without much interest. He took the printout she handed him, and promised to turn it over to the departments that handled those things. But he didn't get up to leave.

"I thought I ought to tell you, Apfel," he said, at last. "The Gavin case has been closed."

I had to think a moment to remember Kluge's real name had been Gavin.

"The coroner ruled suicide a long time ago. I was able to keep the case open quite a while on the strength of my suspicions." He nodded toward Lisa. "And on what she said about the suicide note. But there was just no evidence at all."

"It probably happened quickly," Lisa said. "Somebody caught him, tracked him back—it can be done; Kluge was lucky for a long time—and did him the same day."

"You don't think it was suicide?" I asked Osborne.

"No. But whoever did it is home free unless something new turns up."

"I'll tell you if it does," Lisa said.

"That's something else," Osborne said. "I can't authorize you to work over there any more. The county's taken possession of house and contents."

"Don't worry about it," Lisa said, softly.

There was a short silence as she leaned over to shake a cigarette from the pack on the coffee table. She lit it, exhaled, and leaned back beside me, giving Osborne her most inscrutable look. He sighed.

"I'd hate to play poker with you, lady," he said. "What do you mean, 'Don't worry about it'?"

"I bought the house four days ago. And its contents. If anything turns up that would help you re-open the murder investigation, I will let you know."

Osborne was too defeated to get angry. He studied her quietly for a while.

"I'd like to know how you swung that."

"I did nothing illegal. You're free to check it out. I paid good cash money for it. The house came onto the market. I got a good price at the Sheriff's sale."

"How'd you like it if I put my best men on the transaction? See if they can dig up some funny money? Maybe fraud. How about I get the F.B.I. in to look it all over?"

She gave him a cool look.

"You're welcome to. Frankly, Detective Osborne, I could have stolen that house, Griffith Park, and the Harbor Freeway and I don't think you could have caught me."

"So where does that leave me?"

"Just where you were. With a closed case, and a promise from me."

"I don't like you having all that stuff, if it can do the things you say it can do."

"I didn't expect you would. But that's not your department, is it? The county owned it for a while, through simple confiscation. They didn't know what they had, and they let it go—"

"Maybe I can get the Fraud detail out here to confiscate your software. There's criminal evidence on it."

"You could try that," she agreed.

They stared at each other for a while. Lisa won. Osborne rubbed his eyes and nodded. Then he heaved himself to his feet and slumped to the door.

Lisa stubbed out her cigarette. We listened to him going down the walk.

"I'm surprised he gave up so easy," I said. "Or did he? Do you think he'll try a raid?"

"It's not likely. He knows the score."

"Maybe you could tell it to me."

"For one thing, it's not his department, and he knows it."

"Why did you buy the house?"

"You ought to ask *how*."

I looked at her closely. There was a gleam of amusement behind the poker face.

"Lisa. What did you do?"

"That's what Osborne asked himself. He got the right answer, because he understands Kluge's machines. And he knows how things get done. It was no accident that house going on the market, and no accident I was the only bidder. I used one of Kluge's pet councilmen."

"You bribed him?"

She laughed, and kissed me.

"I think I finally managed to shock you, Yank. That's gotta be the biggest difference between me and a native-born American. Average citizens don't spend much on bribes over here. In Saigon, everybody bribes."

"Did you bribe him?"

"Nothing so indelicate. One has to go in the back door over here. Several entirely legal campaign contributions appeared in the accounts of a State Senator, who mentioned a certain situation to someone, who happened to be in the position to do legally what I happened to want done." She looked at me askance. "Of *course* I bribed him, Victor. You'd be amazed to know how cheaply. Does that bother you?"

"Yes," I admitted. "I don't like bribery."

"I'm indifferent to it. It happens, like gravity. It may not be admirable, but it gets things done."

"I assume you covered yourself."

"Reasonably well. You're never entirely covered with a bribe, because of the human element. The councilman might geek if they got him in front of a grand jury. But they won't, because Osborne won't pursue it. That's the second reason he walked out of here without a fight. *He* knows how the world wobbles, he knows what kind of force I now possess, and he knows he can't fight it."

There was a long silence after that. I had a lot to think about, and I didn't feel good about most of it. At one point Lisa reached for the pack of cigarettes, then changed her mind. She waited for me to work it out.

"It is a terrific force, isn't it," I finally said.

"It's frightening," she agreed. "Don't think it doesn't scare me. Don't think I haven't had fantasies of being super-woman. Power is an awful temptation, and it's not easy to reject. There's so much I could do."

"Will you?"

"I'm not talking about stealing things, or getting rich."

"I didn't think you were."

"This is political power. But I don't know how to wield it... it sounds corny, but to use it for good. I've seen so much evil come from good intentions. I don't think I'm wise enough to do any good. And the chances of getting torn up like Kluge did are large. But I'm not wise enough to walk away from it."

"I'm still a street urchin from Saigon, Yank. I'm smart enough not to use it unless I have to. But I can't give it away, and I can't destroy it. Is that stupid?"

I didn't have a good answer for that one. But I had a bad feeling.

My doubts had another week to work on me. I didn't come to any great moral conclusions. Lisa

knew of some crimes, and she wasn't reporting them to the authorities. That didn't bother me much. She had at her fingertips the means to commit more crimes, and that bothered me a lot. Yet I really didn't think she planned to do anything. She was smart enough to use the things she had only in a defensive way— but with Lisa that could cover a lot of ground.

When she didn't show up for dinner one evening, I went over to Kluge's and found her busy in the living room. A nine-foot section of shelving had been cleared. The discs and tapes were stacked on a table. She had a big plastic garbage can and a magnet the size of a softball. I watched her wave a tape near the magnet, then toss it in the garbage can, which was almost full. She glanced up, did the same operation with a handful of discs, then took off her glasses and wiped her eyes.

"Feel any better now, Victor?" she asked.

"What do you mean? I feel fine."

"No you don't. And I haven't felt right, either. It hurts me to do it, but I have to. You want to go get the other trash can?"

I did, and helped her pull more software from the shelves.

"You're not going to wipe it all, are you?"

"No. I'm wiping records, and... something else."

"Are you going to tell me what?"

"There are things it's better not to know," she said, darkly.

I finally managed to convince her to talk over dinner. She had said little, just eating and shaking her head. But she gave in.

"Rather dreary, actually," she said. "I've been probing around some delicate places the last couple days. These are places Kluge visited at will, but they scare the hell out of me. Dirty places. Places where they know things I thought I'd like to find out."

She shivered, and seemed reluctant to go on. "Are you talking about military computers? The CIA?"

"The CIA is where it starts. It's the easiest. I've looked around at NOR AD—that's the guys who get to fight the next war. It makes me shiver to see how easy Kluge got in there. He cobbled up a way to start World War Three, just as an exercise. That's one of the things we just erased. The last two days I was nibbling around the edges of the big boys. The Defense Intelligence Agency and the National Security... something. DIA and NSA. Each of them is bigger than the CIA. Something knew I was there. Some watchdog program. As soon as I realized that I got out quick, and I've spent the last five hours being sure it didn't follow me. And now I'm sure, and I've destroyed all that, too."

"You think they're the ones who killed Kluge?"

"They're surely the best candidates. He had tons of their stuff. I know he helped design the biggest installations at NSA, and he'd been poking around in there for years. One false step is all it would take."

"Did you get it all? I mean, are you sure?"

"I'm sure they didn't track me. I'm not sure I've destroyed all the records. I'm going back now to take a last look."

"I'll go with you."

We worked until well after midnight. Lisa would review a tape or a disc, and if she was in any doubt, toss it to me for the magnetic treatment. At one point, simply because she was unsure, she took the magnet and passed it in front of an entire shelf of software.

It was amazing to think about it. With that one wipe she had randomized billions of bits of information.

Some of it might not exist anywhere else in the world. I found myself confronted by even harder questions. Did she have the right to do it? Didn't knowledge exist for everyone? But I confess I had little trouble quelling my protests. Mostly I was happy to see it go. The old reactionary in me found it easier to believe There Are Things We Are Not Meant To Know.

We were almost through when her monitor screen began to malfunction. It actually gave off a few hisses and pops, so Lisa stood back from it for a moment, then the screen started to flicker. I stared at it for a while. It seemed to me there was an image trying to form in the screen. Something three-dimensional. Just as I was starting to get a picture of it I happened to glance at Lisa, and she was looking at me. Her face was flickering. She came to me and put her hands over my eyes.

"Victor, you shouldn't look at that."

"It's okay," I told her. And when I said it, it was, but as soon as I had the words out I knew it wasn't. And that is the last thing I remembered for a long time.

I'm told it was a very bad two weeks. I remember very little of it. I was kept under high dosage of drugs, and my few lucid periods were always followed by a fresh seizure.

The first thing I recall clearly was looking up at Doctor Stuart's face. I was in a hospital bed. I later learned it was in Cedars-Sinai, not the Veteran's Hospital. Lisa had paid for a private room.

Stuart put me through the usual questions. I was able to answer them, though I was very tired. When he was satisfied as to my condition he finally began to answer some of my questions. I learned how long I had been there, and how it had happened.

"You went into consecutive seizures," he confirmed. "I don't know why, frankly. You haven't been prone to them for a decade. I was thinking you were well under control. But nothing is ever really stable, I guess."

"So Lisa got me here in time."

"She did more than that. She didn't want to level with me at first. It seems that after the first seizure she witnessed she read everything she could find. From that day, she had a syringe and a solution of Valium handy. When she saw you couldn't breathe she injected you with 100 milligrams, and there's no doubt it saved your life."

Stuart and I had known each other a long time. He knew I had no prescription for Valium, though we had talked about it the last time I was hospitalized. Since I lived alone, there would be no one to inject me if I got in trouble.

He was more interested in results than anything else, and what Lisa did had the desired result. I was still alive.

He wouldn't let me have any visitors that day. I protested, but soon was asleep. The next day she came. She wore a new T-shirt. This one had a picture of a robot wearing a gown and mortarboard, and said "Class of 11111000000." It turns out that was 1984 in binary notation.

She had a big smile and said "Hi, Yank!" and as she sat on the bed I started to shake. She looked alarmed and asked if she should call the doctor.

"It's not that," I managed to say. "I'd like it if you just held me."

She took off her shoes and got under the covers with me. She held me tightly. At some point a nurse came in and tried to shoo her out. Lisa gave her profanities in Vietnamese, Chinese, and a few startling ones in English, and the nurse left. I saw Doctor Stuart glance in later.

I felt much better when I finally stopped crying. Lisa's eyes were wet, too.

"I've been here every day," she said. "You look awful, Victor."

"I feel a lot better."

"Well, you look better than you did. But your doctor says you'd better stick around another couple of days, just to make sure."

"I think he's right."

"I'm planning a big dinner for when you get back. You think we should invite the neighbors?"

I didn't say anything for a while. There were so many things we hadn't faced. Just how long could it go on between us? How long before I got sour about being so useless? How long before she got tired of being with an old man? I don't know just when I had started to think of Lisa as a permanent part of my life. And I wondered how I could have thought that.

"Do you want to spend more years waiting in hospitals for a man to die?"

"What do you want, Victor? I'll marry you if you want me to. Or I'll live with you in sin. I prefer sin, myself, but if it'll make you happy—"

"I don't know why you want to saddle yourself with an epileptic old fart."

"Because I love you."

It was the first time she had said it. I could have gone on questioning—bringing up her Major again, for instance—but I had no urge to. I'm very glad I didn't. So I changed the subject.

"Did you get the job finished?"

She knew which job I was talking about. She lowered her voice and put her mouth close to my ear.

"Let's don't be specific about it here, Victor. I don't trust any place I haven't swept for bugs. But, to put your mind at ease, I did finish, and it's been a quiet couple of weeks. No one is any wiser, and I'll never meddle in things like that again."

I felt a lot better, I was also exhausted. I tried to conceal my yawns, but she sensed it was time to go. She gave me one more kiss, promising many more to come, and left me.

It was the last time I ever saw her.

At about ten o'clock that evening Lisa went into Kluge's kitchen with a screwdriver and some other tools and got to work on the microwave oven.

The manufacturers of those appliances are very careful to insure they can't be turned on with the door open, as they emit lethal radiation. But with simple tools and a good brain it is possible to circumvent the safety interlocks. Lisa had no trouble with them. About ten minutes after she entered the kitchen she put her head in the oven and turned it on.

It is impossible to say how long she held her head in there. It was long enough to turn her eyeballs to the consistency of boiled eggs. At some point she lost voluntary muscle control and fell to the floor, pulling the microwave down with her. It shorted out, and a fire started.

The fire set off the sophisticated burglar alarm she had installed a month before. Betty Lanier saw the flames and called the fire department as Hal ran across the street and into the burning kitchen. He dragged what was left of Lisa out onto the grass. When he saw what the fire had done to her upper body, and in particular her breasts, he threw up.

She was rushed to the hospital. The doctors there ampu-tated one arm and cut away the frightful masses of vulcanized silicone, pulled all her teeth, and didn't know what to do about the eyes. They put her on a respirator.

It was an orderly who first noticed the blackened and bloody T-shirt they had cut from her. Some of the message was unreadable, but it began, "I can't go on this way any-more..."



\* \* \*

There is no other way I could have told all that. I discovered it piecemeal, starting with the disturbed look on Doctor Stuart's face when Lisa didn't show up the next day. He wouldn't tell me anything, and I had another seizure shortly after.

The next week is a blur. I remember being released from the hospital, but I don't remember the trip home. Betty was very good to me. They gave me a tranquilizer called Tranxene, and it was even better. I ate them like candy. I wandered in a drugged haze, eating only when Betty insisted, sleeping sitting up in my chair, coming awake not knowing where or who I was. I returned to the prison camp many times. Once I recall helping Lisa stack severed heads.

When I saw myself in the mirror, there was a vague smile on my face. It was Tranxene, caressing my frontal lobes. I knew that if I was to live much longer, me and Tranxene would have to become very good friends.

I eventually became capable of something that passed for rational thought. I was helped along somewhat by a visit from Osborne. I was trying, at that time, to find reasons to live, and wondered if he had any.

"I'm very sorry," he started off. I said nothing. "This is on my own time," he went on. "The department doesn't know I'm here."

"Was it suicide?" I asked him.

"I brought along a copy of the... the note. She ordered it from a shirt company in Westwood, three days before the... accident."

He handed it to me, and I read it. I was mentioned, though not by name. I was "the man I love." She said she couldn't cope with my problems. It was a short note. You can't get too much on a T-shirt. I read it through five times, then handed it back to him.

"She told you Kluge didn't write his note. I tell you she didn't write this."

He nodded reluctantly. I felt a vast calm, with a howling nightmare just below it. Praise Tranxene.

"Can you back that up?"

She saw me in the hospital shortly before it all happened. She was full of life and hope. You say she ordered the shirt three days before. I would have felt that. And that note is pathetic. Lisa was never pathetic."

He nodded again. '

"Some things I want to tell you. There were no signs of a struggle. Mrs. Lanier is sure no one came in the front. The crime lab went over the whole place and we're sure no one was in there with her. I'd stake my life on the fact that no one entered or left that house. Now, / don't believe it was suicide, either, but do you have any suggestions?"

"The NSA," I said.

I explained about the last things she had done while I was still there. I told him of her fear of the government spy agencies. That was all I had.

"Well, I guess they're the ones who could do a thing like that, if anyone could. But I'll tell you, I have a hard time swallowing it. I don't know why, for one thing. Maybe you believe those people kill like you and I'd swat a fly." His look made it into a question.

"I don't know what I believe."

"I'm not saying they wouldn't kill for national security, or some such shit. But they'd have taken the

computers, too. They wouldn't have left her alone, they wouldn't even have let her *near* that stuff after they killed Kluge."

"What you're saying makes sense."

He muttered on about it for quite some time. Eventually I offered him some wine. He accepted thankfully. I considered joining him—it would be a quick way to die—but did not. He drank the whole bottle, and was comfortably drunk when he suggested we go next door and look it over one more time. I was planning on visiting Lisa the next day, and knew I had to start somewhere building myself up for that, so I agreed to go with him.

We inspected the kitchen. The fire had blackened the count-ers and melted some linoleum, but not much else. Water had made a mess of the place. There was a brown stain on the floor which I was able to look at with no emotion.

So we went back to the living room, and one of the computers was turned on. There was a short message on the screen.

**IF YOU WISH TO KNOW MORE PRESS ENTERB**

"Don't do it," I told him. But he did. He stood, blinking solemnly, as the words wiped themselves out and a new message appeared.

**YOU LOOKED**

The screen started to flicker and I was in my car, in darkness, with a pill in my mouth and another in my hand. I spat out the pill, and sat for a moment, listening to the old engine ticking over. In my other hand was the plastic pill bottle. I felt very tired, but opened the car door and shut off the engine. I felt my way to the garage door and opened it. The air outside was fresh and sweet. I looked down at the pill bottle and hurried into the bathroom.

When I got through what had to be done there were a dozen pills floating in the toilet that hadn't even dissolved. There were the wasted shells of many more, and a lot of other stuff I won't bother to describe. I counted the pills in the bottle, remembered how many there had been, and wondered if I would make it.

I went over to Kluge's house and could not find Osborae. I was getting tired, but I made it back to my house and stretched out on the couch to see if I would live or die.

The next day I found the story in the paper. Osborne had gone home and blown out the back of his head with his revolver. It was not a big story. It happens to cops all the time. He didn't leave a note.

I got on the bus and rode out to the hospital and spent three hours trying to get in to see Lisa. I wasn't able to do it. I was not a relative and the doctors were quite firm about her having no visitors. When I got angry they were as gentle as possible. It was then I learned the extent of her injuries. Hal had kept the worst from me. None of it would have mattered, but the doctors swore there was nothing left in her head. So I went home.

She died two days later.

She had left a will, to my surprise. I got the house and contents. I picked up the phone as soon as I learned of it, and called a garbage company. While they were on the way I went for the last time into Kluge's house.

The same computer was still on, and it gave the same message.

**PRESS ENTER!**

I cautiously located the power switch, and turned it off. I had the garbage people strip the place to the bare walls.

I went over my own house very carefully, looking for anything that was even the first cousin to a

computer. I threw out the radio. I sold the car, and the refrigerator, and the stove, and the blender, and the electric clock. I drained the waterbed and threw out the heater.

Then I bought the best propane stove on the market, and hunted a long time before I found an old icebox. I had the garage stacked to the ceiling with firewood. I had the chimney cleaned. It would be getting cold soon.

One day I took the bus to Pasadena and established the Lisa Foo Memorial Scholarship fund for Vietnamese refugees and their children. I endowed it with seven hundred thousand eighty-three dollars and four cents. I told them it could be used for any field of study except computer science. I could tell they thought me eccentric.

And I really thought I was safe, until the phone rang.

I thought it over for a long time before answering it. In the end, I knew it would just keep on going until I did. So I picked it up.

For a few seconds there was a dial tone, but I was not fooled. I kept holding it to my ear, and finally the tone turned off. There was just silence. I listened intently. I heard some of those far-off musical tones that live in phone wires. Echoes of conversations taking place a thousand miles away. And something infinitely more distant and cool.

I do not know what they have incubated out there at the NSA. I don't know if they did it on purpose, or if it just happened, or if it even has anything to do with them, in the end. But I know it's out there, because I heard its soul breathing on the wires. I spoke very carefully.

"I do not wish to know any more," I said. "I won't tell anyone anything. Kluge, Lisa, and Osborne all committed suicide. I am just a lonely man, and I won't cause you any trouble." There was a click, and a dial tone.

Getting the phone taken out was easy. Getting them to remove all the wires was a little harder, since once a place is wired they expect it to be wired forever. They grumbled, but when I started pulling them out myself, they relented, though they warned me it was going to cost.

The power company was harder. They actually seemed to believe there was a regulation requiring each house to be hooked up to the grid. They were willing to shut off my power—though hardly pleased about it—but they just weren't going to take the wires away from my house. I went up on the roof with an axe and demolished four feet of eaves as they gaped at me. Then they coiled up their wires and went home.

I threw out all my lamps, all things electrical. With hammer, chisel, and handsaw I went to work on the dry wall just above the baseboards.

As I stripped the house of wiring I wondered many times why I was doing it. Why was it worth it? I couldn't have very many more years before a final seizure finished me off. Those years were not going to be a lot of fun.

Lisa had been a survivor. She would have known why I was doing this. She had once said I was a survivor, too. I survived the camp. I survived the death of my mother and father and managed to fashion a solitary life. Lisa survived the death of just about everything. No survivor expects to live through it all. But while she was alive, she would have worked to stay alive.

And that's what I did. I got all the wires out of the walls, went over the house with a magnet to see if I had missed any metal, then spent a week cleaning up, fixing the holes I had knocked in the walls, ceiling, and attic. I was amused trying to picture the real-estate agent selling this place after I was gone.

It's a great little house, folks. No electricity...

Now I live quietly, as before.

I work in my garden during most of the daylight hours. I've expanded it considerably, and even have things growing in the front yard now.

I live by candlelight, and kerosene lamp. I grow most of what I eat.

It took a long time to taper off the Tranxene and the Dilantin, but I did it, and now take the seizures as they come. I've usually got bruises to show for it.

In the middle of a vast city I have cut myself off. I am not part of the network growing faster than I can conceive. I don't even know if it's dangerous, to ordinary people. It noticed me, and Kluge, and Osborne. And Lisa. It brushed against our minds like I would brush away a mosquito, never noticing I had crushed it. Only I survived.

But I wonder.

It would be very hard...

Lisa told me how it can get in through the wiring. There's something called a carrier wave that can move over wires carrying household current. That's why the electricity had to go-

I need water for my garden. There's just not enough rain here in southern California, and I don't know how else I could get the water.

Do you think it could come through the pipes?

#### *BLUED MOON* Connie Willis

*One of the chanciest areas of scientific study is that which tries to delineate and predict the laws of probability—for probability is subject to change without notice, it seems. (Actually it isn't — but it's always possible for strange things to happen that stretch those "laws" without breaking them.) Here we have a funny novelette that will stretch your grin as much as it stretches the laws.*

*Connie Willis won two Nebula Awards in one night in 1983 for her short fiction, most of which is thoughtful and moving. So is this story, but it brings an added dimension of humor that's rare in science fiction.*

FOR IMMEDIATE RELEASE: Mowen Chemical today announced implementation of an innovative waste emissions installation at its experimental facility in Chugwater, Wyo-ming. According to project directors Bradley McAfee and Lynn Saunders, nonutilizable hydrocarbonaceous substances will be propulsively transferred to stratospheric altitudinal locations, where photochemical decomposition will result in triatomic allotropism and formation of benign bicarbonaceous precipitates. Preliminary predictive databasing indicates posi-tive ozonation yields without statistically significant shifts in lateral ecosystem equilibria.

"Do you suppose Walter Hunt would have invented the safety pin if he had known that punk rockers would stick them through their cheeks?" Mr. Mowen said. He was look-ing gloomily out the window at the distant 600-foot-high smokestacks.

"I don't know, Mr. Mowen," Janice said. She sighed. "Do you want me to tell them to wait again?"

The sigh was supposed to mean, It's after four o'clock and it's getting dark, and you've already asked Research to wait three times, and when are you going to make up your mind? but Mr. Mowen ignored it.

"On the other hand," he said. "What about diapers? And all those babies that would have been stuck with straight pins if it hadn't been for the safety pin?"

"It is supposed to help restore the ozone layer, Mr. Mowen," Janice said. "And according to Research, there won't be any harmful side effects."

"You shoot a bunch of hydrocarbons into the stratosphere, and there won't be any harmful side effects. According to Research." Mr. Mowen swivelled his chair around to look at Janice, nearly knocking over the picture of his daughter Sally that sat on his desk. "I stuck Sally once. With a safety pin. She screamed for an hour. How's that for a harmful side effect? And what about the stuff that's left over after all this ozone is formed? Bicarbonate of soda, Research says. Perfectly harmless. How do they know that? Have they ever dumped bicarbonate of soda on people before? Call Research..."he started to say, but Janice had already picked up the phone and tapped the number. She didn't even sigh. "Call Research and ask them to figure out what effect a bicarbonate of soda rain would have."

"Yes, Mr. Mowen," Janice said. She put the phone up to her ear and listened for a moment. "Mr. Mowen..." she said hesitantly.

"I suppose Research says it'll neutralize the sulfuric acid that's killing the statues and sweeten and deodorize at the same time."

"No, sir," Janice said. "Research says they've already started the temperature-differential kilns, and you should be seeing something in a few minutes. They say they couldn't wait any longer."

Mr. Mowen whipped back around in his chair to look out the window. The picture of Sally teetered again, and Mr. Mowen wondered if she were home from college yet. Nothing was coming out of the smokestacks. He couldn't see the candlestick-base kilns through the maze of fast-food places and trailer parks. A McDonald's sign directly in front of the smokestacks blinked on suddenly, and Mr. Mowen jumped. The smokestacks themselves remained silent and still except for their blinding strobe aircraft lights. He could see sagebrush-covered hills in the space between the stacks, and the whole scene, except for the McDonald's sign, looked unbelievably serene and harmless.

"Research says the kilns are fired to full capacity," Janice said, holding the phone against her chest.

Mr. Mowen braced himself for the coming explosion. There was a low rumbling like distant fire, then a puff of whitish smoke, and finally a deep, whooshing sound like one of Janice's sighs, and two columns of blue shot straight up into the darkening sky.

"Why is it blue?" Mr. Mowen said.

"I already asked," Janice said. "Research says visible spectrum diffraction is occurring because of the point eight micron radii of the hydrocarbons being propelled..."

"That sounds like that damned press release," Mr. Mowen said. "Tell them to speak English."

After a minute of talking into the phone, she said, "It's the same effect that causes the sunsets after a volcanic eruption. Scattering. Research wants to know what staff members you'd like to have at the press conference tomorrow."

"The directors of the project," Mr. Mowen said grumpily, "and anyone over at Research who can speak English."

Janice looked at the press release. "Bradley McAfee and Lynn Saunders are the directors," she said.

"Why does the name McAfee sound familiar?"

"He's Ulric Henry's roommate. The company linguist you hired to..."

"I know why I hired him. Invite Henry, too. And try to get Sally as soon as she gets home. Tell her that I expect her there; and tell her to dress up." He looked at his watch. "Well," he said. "It's been going five minutes, and there haven't been any harmful side effects yet."

The phone rang. Mr. Mowen jumped. "I knew it was too good to last," he said. "Who is it? The

EPA?"

"No," Janice said, and sighed. "It's your ex-wife."

"I'm shut of that," Brad said when Ulric came in the door. He was sitting in the dark, the green glow of the monitor lighting his face. He tapped at the terminal keys for a minute more and then turned around. "All done. Slicker'n goose grease."

Ulric turned on the light. "The waste-emissions project?" he said.

"Nope. We turned that on this afternoon. Works prettier than a spotted pony. No, I been spending the last hour erasing my fiancée Lynn's name from the project records."

"Won't Lynn object to that?" Ulric said, fairly calmly, mostly because he did not have a very clear idea of which one Lynn was. He never could tell Brad's fiancées apart. They all sounded exactly the same.

"She won't hear tell of it till it's too late," Brad said. "She's on her way to Cheyenne to catch a plane back east. Her mother's all het up about getting a divorce. Caught her husband Adam 'n' Evin'."

If there was anything harder to put up with than Brad's rottenness, it was his incredibly good luck. While Ulric was sure Brad was low enough to engineer a sudden family crisis to get Lynn out of Chugwater, he was just as sure that he had had no need to. It was a lucky coincidence that Lynn's mother was getting a divorce just now, and lucky coincidences were Brad's specialty. How else could he have kept three fiancées from ever meeting each other in the small confines of Chugwater and Mowen Chemical?

"Lynn?" Ulric said. "Which one is that? The redhead in programming?"

"Nope, that's Sue. Lynn's little and yellow-haired and smart as a whip about chemical engineering. Kind of a dodunk about every thin' else."

"Dodunk," Ulric said to himself. He should make a note to look that up. It probably meant "one so foolish as to associate with Brad McAfee." That definitely included him. He had agreed to room with Brad because he was so surprised at being hired that it had not occurred to him to ask for an apartment of his own.

He had graduated with an English degree that everyone had told him was worse than useless in Wyoming, and which he very soon found out was. In desperation, he had applied for a factory job at Mowen Chemical and been hired on as com-pany linguist at an amazing salary for reasons that had not yet become clear, though he had been at Mowen for over three months. What *had* become clear was that Brad McAfee was, to use his own colorful language, a thimblerrigger, a pigeon plucker, a hornswoggler. He was steadily working his way toward the boss's daughter and the ownership of Mowen Chemical, leaving a trail of young women behind him who all apparently believed that a man who pronounced fiancée "fee-an-see" couldn't possibly have more than one. It was an interesting linguistic phenomenon.

At first Ulric had been taken in by Brad's homespun talk, too, even though it didn't seem to match his sophisticated abilities on the computer. Then one day he had gotten up early and caught Brad working on a program called "Project Sally."

"I'm gonna be the president of Mowen Chemical in two shakes of a sheep's tail," Brad had said. "This little dinglinker is my master plan. What do you think of it?"

What Ulric thought of it could not be expressed in words. It outlined a plan for getting close to Sally Mowen and impress-ing her father based almost entirely on the seduction and abandonment of young women in key positions at Mowen Chemical. Three-quarters of the way down he saw Lynn's name.

"What if Mr. Mowen gets hold of this program?" Ulric had said finally.

"Not a look-in chance that that'd happen. I got this pro-gram locked up tighter than a hog's eye. And if anybody else tried to copy it, they'd be sorrier than a coon romancin' a polecat."

Since then Ulric had put in six requests for an apartment, all of which had been turned down 'due to restrictive areal housing availability," which Ulric supposed meant there weren't any empty apartments in Chugwater. All of the turndowns were initialed by Mr. Mowen's secretary, and there were moments when Ulric thought that Mr. Mowen knew about "Project Sally" after all and had hired Ulric to keep Brad away from his daughter.

"According to my program, it's time to go to work on Sally," Brad said now. "Tomorrow at this press conference. I'm enough of a rumbustigator with this waste-emissions project to dazzlefy Old Man Mowen. Sally's going to be there. I got my fiancee Gail in publicity to invite her."

"I'm going to be there, too," Ulric said belligerently.

"Now, that's right lucky," Brad said. "You can do a little honeyfuggling for me. Work on old Sally while I give Pappy Mowen the glad hand. Do you know what she looks like?"

"I have no intention of honeyfuggling Sally Mowen for you," Ulric said, and wondered again where Brad managed to pick up all these slang expressions. He had caught Brad watching Judy Canova movies on TV a couple of times, but some of these words weren't even in Mencken. He probably had a computer program that generated them. "In fact, I intend to tell her you're engaged to more than one person already."

"Boy, you're sure wadgetty," Brad said. "And you know why? Because you don't have a gal of your own. Tell you what, you pick out one of mine, and I'll give her to you. How about Sue?"

Ulric walked over to the window. "I don't want her," he said.

"I bet you don't even know which one she is," Brad said.

I don't, Ulric thought. They all sound exactly alike. They use "interface" as a verb and "support" as an adjective. One of them had called for Brad and when Ulric told her he was over at Research, she had said, "Sorry. My wetware's non-functional this morning." Ulric felt as if he were living in a foreign country.

"What difference does it make?" Ulric said angrily. "Not one of them speaks English, which is probably why they're all dumb enough to think they're engaged to you."

"How about if I get you a gal who speaks English and you honeyfuggle Sally Mowen for me?" Brad said. He turned to the terminal and began typing furiously. "What exactly do you want?"

Ulric clenched his fists and looked out the window. The dead cottonwood under the window had a kite or something caught in its branches. He debated climbing down the tree and walking over to Mr. Mowen's office to demand an apartment.

"Makes no never mind," Brad said when he didn't answer. "I've heard you oratin' often enough on the subject." He typed a minute more and hit the print button. "There," he said.

Ulric turned around.

Brad read from the monitor, "Wanted: Young woman who can generate enthusiasm for the Queen's English, needs to use correct grammar and syntax, no gobbledygook, no slang, respect for the language. Signed, Ulric Henry.' What do you think of that? It's the spittin' image of the way you talk."

"I can find my own 'gals,'" Ulric said. He yanked the sheet of paper as it was still coming out of the printer, ripping over half the sheet in a long ragged diagonal. Now it read, "Wanted: Young woman who can generate language. Ulric H"

"I'll swap you horses," Brad said. "If this don't rope you in a nice little filly, I'll give you Lynn when she gets back."

It'll cheer her up, after getting her name taken off the project and all. What do you think of that?"

Ulric put the scrap of paper down carefully on the table, trying to resist the impulse to wad it up and cram it down Brad's throat. He slammed the window up. There was a sudden burst of chilly wind, and the paper on the table balanced uneasily and then drifted onto the windowsill.

"What if Lynn misses her plane in Cheyenne?" Ulric said. "What if she comes back here and runs into one of your other fiancées?"

"No chance on the map," Brad said cheerfully. "I got me a program for that, too." He tore the rest of the paper out of the printer and wadded it up. "Two of my fiancées come callin' at the same time, they have to come up in the elevators, and there's only two of them. They work on the same signals, so I made me up a program that stops the elevators between floors if my security code gets read in more than once in an hour. It makes an override beep go off on my terminal, too, so's I can soft-shoe the first gal down the back stairs." He stood up. "I gotta go over to Research and check on the waste-emissions project again. You better find yourself a gal right quick. You're givin' me the flit-flats with all this unfriendly talk."

He grabbed his coat off the back of the chair and went out. He slammed the door, perhaps because he had the flit-flats, and the resultant breeze hit the scrap of paper on the window-sill and sailed it neatly out the window.

"Flit-flats," Ulric mumbled to himself, and tried to call Mowen's office. The line was busy.

Sally Mowen called her father as soon as she got home. "Hi, Janice," she said. "Is Dad there?"

"He just left," Janice said. "But I have a feeling he might stop by Research. He's worried about the new stratospheric waste-emissions project."

"I'll walk over and meet him."

"Your father said to tell you there's a press conference tomorrow at eleven. Are you at your terminal?"

"Yes," Sally said, and flicked the power on.

"I'll send the press releases for you so you'll know what's going on."

Sally was going to say that she had already received an invitation to the press conference and the accompanying PR material from someone named Gail, but changed her mind when she saw what was being printed out on the printer. "You didn't send me the press releases," she said. "You sent me a bio on somebody named Ulric Henry. Who's he?"

"I did?" Janice said, sounding flustered. "I'll try it again."

Sally held up the tail of the printout sheet as it came rolling out of the computer. "Now I've got a picture of him." The picture showed a dark-haired young man with an expression somewhere between dismay and displeasure. I'll bet someone just told him she thought they could have a viable relationship, Sally thought. "Who is he?"

Janice sighed, a quick, flustered kind of sigh. "I didn't mean to send that to you. He's the company linguist. I think your father invited him to the press conference to write press releases."

I thought the press releases were already done and you were sending them to me, Sally thought, but she said, "When did my father hire a linguist?"

"Last summer," Janice said, sounding even more flustered. "How's school?"

"Fine," Sally said. "And no, I'm not getting married. I'm not even having a viable relationship, whatever that is."



"Your mother called today. She's in Cheyenne at a NOW rally," Janice said, which sounded like a non sequitur, but wasn't. With a mother like Sally's, it was no wonder her father worried himself sick over who Sally might marry. Sometimes Sally worried, too. Viable relationship.

"How did Charlotte sound?" Sally said. "No, wait. I already know. Look, don't worry about the press conference stuff. I already know all about it. Gail Somebody in publicity sent me an invitation. That's why I came home for Thanks-giving a day early."

"She did?" Janice said. "Your father didn't mention it. He probably forgot. He's been a little worried about this project," she said, which must be the understatement of the year, Sally thought, if he'd managed to rattle Janice. "So you haven't met anyone nice?"

"No," Sally said. "Yes. I'll tell you tomorrow." She hung up. They're all nice, she thought. That isn't the problem. They're nice, but they're incoherent. A viable relationship. What on earth was that? And what was "respecting your personal space"? Or "fulfilling each other's socio-economic needs"? I have no idea what they are talking about. Sally thought. I have been going out with a bunch of foreigners.

She put her coat and her hat back on and started down in the elevator to find her father. Poor man. He knew what it was like to be married to someone who didn't speak English. She could imagine what the conversation with her mother had been like. All sisters and sexist pigs. She hadn't been speaking ERA very long. The last time she called, she had been speaking EST and the time before that California. It was no wonder Sally's father had hired a secretary that communicated almost entirely through sighs, and that Sally had majored in English.

Tomorrow at the press conference would be dreadful. She would be surrounded by nice young men who spoke Big Business or Computer or Bachelor on the Make, and she would not understand a word they said.

It suddenly occurred to her that the company linguist, Ulric something, might speak English, and she punched in her security code all over again and went back up in the elevator to get the printout with his address on it. She decided to go through the oriental gardens to get to Research instead of taking the car. She told herself it was shorter, which was true, but she was really thinking that if she went through them, she would go past the housing unit where Ulric Henry lived.

The oriental gardens had originally been designed as a shortcut through the maze of fast-food places that had sprung up around Mowen Chemical, making it impossible to get anywhere quickly. Her father had purposely stuck Mowen Chemical on the outskirts of Chugwater so the plant wouldn't disturb the natives, trying to make the original buildings and housing blend in to the Wyoming landscape. The natives had promptly disturbed Mowen Chemical, so that by the time they built the Research complex and computer center, the only land not covered with Kentucky Fried Chickens and Arbys was in the older part of town and very far from the original buildings. Mr. Mowen had given up trying not to disturb the natives. He had built the oriental gardens so that at least people could get from home to work and back again without being run over by the Chugwaterians. Actually, he had intended just to put in a brick path that would wind through the original Mowen buildings and connect them with the new ones, but at the time Charlotte had been speaking Zen. She had insisted on bonsais and a curving bridge over the irrigation ditch. Before the landscaping was finished, she had switched to an Anti-Watt dialect that had put an end to the marriage and sent Sally flying off east to school. During that same period her mother had campaigned to save the dead cottonwood she was standing under now, picketing her husband's office with signs that read, "Tree Murderer!"

Sally stood under the dead cottonwood tree, counting the windows so she could figure out which was Ulric Henry's apartment. There were three windows on the sixth floor with lights in all three, and the middle window was open for some unknown reason, but it would require an incredible coincidence to have Ulric Henry come and stand at one of the windows while Sally was standing there so she could shout up to him, "Do you speak English?"

I wasn't looking for him anyway, she told herself stub-bornly, I'm on my way to meet my father, and I stopped to look at the moon. My, it certainly is a peculiar blue color tonight. She stood a few minutes longer under the tree, pretending to look at the moon, but it was getting very cold, the moon did not seem to be getting any bluer, and even if it were, it did not seem like an adequate reason for freezing to death, so she pulled her hat down farther over her ears and walked past the bonsais and over the curved bridge towards Research.

As soon as she was across the bridge, Ulric Henry came to the middle window and shut it. The movement of pulling the window shut made a little breeze. The torn piece of printout paper that had been resting on the ledge fluttered to a place closer to the edge and then went over, drifting down in the bluish moonlight past the kite, and coming to rest on the second lowest branch of the cottonwood tree.

Wednesday morning Mr. Mowen got up early so he could get some work done at the office before the press conference. Sally wasn't up yet, so he put the coffee on and went into the bathroom to shave. He plugged his electric razor into the outlet above the sink, and the light over the mirror promptly went out. He took the cord out of the outlet and unscrewed the blackened bulb. Then he pattered into the kitchen in his bare feet to look for another light bulb.

He put the burned-out bulb gently in the wastebasket next to the sink and began opening cupboards. He picked up the syrup bottle to look behind it. The lid was not screwed on tightly, and the syrup bottle dropped with a thud onto its side and began oozing syrup all over the cupboard. Mr. Mowen grabbed a paper towel, which tore in a ragged, useless diagonal, and tried to mop it up. He knocked the salt shaker over into the pool of syrup. He grabbed the other half of the paper towel and turned on the hot water faucet to wet it. The water came out in a steaming blast.

Mr. Mowen jumped sideways to get out of the path of the boiling water and knocked over the wastebasket. The light bulb bounced out and smashed onto the kitchen floor. Mr. Mowen stepped on a large ragged piece. He tore off more paper towels to stanch the blood and limped back to the bathroom, walking on the side of his bleeding foot, to get a bandaid.

He had forgotten about the light in the bathroom being burned out. Mr. Mowen felt his way to the medicine cabinet, knocking the shampoo and a box of Q-Tips into the sink before he found the bandaids. The shampoo lid wasn't screwed on tightly either. He took the metal box of bandaids back to the kitchen.

It was bent, and Mr. Mowen got a dent in his thumb trying to pry the lid off. As he was pushing on it, the lid suddenly sprang free, spraying bandaids all over the kitchen floor. Mr. Mowen picked one up, being careful to avoid the pieces of light bulb, ripped the end off the wrapper, and pulled on the orange string. The string came out. Mr. Mowen looked at the string for a long minute and then tried to open the bandaid from the back.

When Sally came into the kitchen, Mr. Mowen was sitting on a kitchen chair sucking his bleeding thumb and holding a piece of paper towel to his other foot. "What happened?" she said.

"I cut myself on a broken light bulb," Mr. Mowen said. "It went out while I was trying to shave."

She grabbed for a piece of paper towelling. It tore off cleanly at the perforation, and Sally wrapped Mr. Mowen's thumb in it. "You know better than to try to pick up a broken light bulb," she said. "You should have gotten a broom."

"I did not try to pick up the light bulb," he said. "I cut my thumb on a bandaid. I cut my *feet* on the light bulb."

"Oh, I see," Sally said. "Don't you know better than to try to pick up a light bulb with your feet?"

"This isn't funny," Mr. Mowen said indignantly. "I am in a lot of pain."

"I know it isn't funny," Sally said. She picked a bandaid up off the floor, tore off the end, and pulled the string neatly along the edge of the wrapping. "Are you going to be able to make it to your press conference?"

"Of course I'm going to be able to make it. And I expect you to be there, too."

"I will," Sally said, peeling another bandaid and applying it to the bottom of his foot. "I'm going to leave as soon as I get this mess cleaned up so I can walk over. Or would you like me to drive you?"

"I can drive myself," Mr. Mowen said, starting to get up.

"You stay right there until I get your slippers," Sally said, and darted out of the kitchen. The phone rang. "I'll get it," Sally called from the bedroom. "You don't budge out of that chair."

Mr. Mowen picked a bandaid up off the floor, tore the end off of it, and peeled the string along the side, which made him feel considerably better. My luck must be starting to change, he thought. "Who's on the phone?" he said cheer-fully, as Sally came back into the kitchen carrying his slippers and the phone.

She plugged the phone cord into the wall and handed him the receiver. "It's Mother," she said. "She wants to talk to the sexist pig."

Ulric was getting dressed for the press conference when the phone rang. He let Brad answer it. When he walked into the living room, Brad was hanging up the phone.

"Lynn missed her plane," Brad said.

Ulric looked up hopefully. "She did?"

"Yes. She's taking one out this afternoon. While she was shooting the breeze, she let fall she'd signed her name on the press release that was sent out on the computer."

"And Mowen's already read it," Ulric said. "So he'll know you stole the project away from her." He was in no mood to mince words. He had lain awake most of the night trying to decide what to say to Sally Mowen. What if he told her about "Project Sally" and she looked blankly at him and said, "Sorry. My wetware is inoperable."?

"I didn't steal the project," Brad said amiably. "I just sort of skyugled it away from her when she wasn't looking. And I already got it back. I called Gail as soon as Lynn hung up and asked her to take Lynn's name off the press releases before Old Man Mowen saw them. It was right lucky, Lynn missing her plane and all."

Ulric put his down parka on over his sports coat.

"Are you heading for the press conference?" Brad said. "Wait till I rig myself out, and I'll ride over with you."

"I'm walking," Ulric said, and opened the door.

The phone rang. Brad answered it. "No, I wasn't watching the morning movie," Brad said, "but I'd take it big if you'd let me gander a guess anyway. I'll say the movie is *Carolina Cannonball* and the jackpot is six hundred and fifty-one dollars. That's right? Well, bust my buttons. That was a right lucky guess."

Ulric slammed the door behind him.

When Mr. Mowen still wasn't in the office by ten, Janice called him at home. She got a busy signal. She sighed, waited a minute, and tried again. The line was still busy. Before she could hang up, the phone flashed an incoming call. She punched the button. "Mr. Mowen's office," she said.

"Hi," the voice on the phone said. "This is Gail over in publicity. The press releases contain an

inoperable statement. You haven't sent any out, have you?"

I tried, Janice thought with a little sigh. "No," she said.

"Good. I wanted to confirm non-release before I effected the deletion."

"What deletion?" Janice said. She tried to call up the press release but got a picture of Ulric Henry instead.

"The release catalogs Lynn Saunders as co-designer of the project."

"I thought she *was* co-designer."

"Oh, no," Gail said. "My fiance Brad McAfee designed the whole project. I'm glad the number of printouts is non-significant."

After Gail hung up, Janice tried Mr. Mowen again. The line was still busy. Janice called up the company directory on her terminal, got a resume on Ulric Henry instead, and called the Chugwater operator on the phone. The operator gave her Lynn Saunders's number. Janice called Lynn and got her roommate.

"She's not here," the roommate said. "She had to leave for back east as soon as she was done with the waste-emissions thing. Her mother was doing head trips on her. She was really bummed out by it."

"Do you have a number where I could reach her?" Janice asked.

"I sure don't," the roommate said. "She wasn't with it at all when she left. Her fiance might have a number."

"Her fiance?"

"Yeah. Brad McAfee."

"I think if she calls you'd better have her call me. Prior-ity." Janice hung up the phone. She called up the company directory on her terminal again and got the press release for the new emissions project. Lynn's name was nowhere on it. She sighed, an odd, angry sigh, and tried Mr. Mowen's number again. It was still busy.

On Sally's way past Ulric Henry's housing unit, she noticed something fluttering high up in the dead cottonwood tree. The remains of a kite were tangled at the very top, and just out of reach, on the second lowest branch, there was a piece of white paper. She tried a couple of halfhearted jumps, swiping at the paper with her hand, but she succeeded only in blowing the paper farther out of reach. If she could get the paper down, she could take it up to Ulric Henry's apartment and ask him if it had fallen out of his window. She looked around for a stick and then stood still, feeling foolish. There was no more reason to go after the paper than to attempt to get the ruined kite down, she told herself, but even as she thought that, she was measuring the height of the branches to see if she could get a foot up and reach the paper from there. One branch wouldn't do it, but two might. There was no one in the gardens. This is ridiculous, she told herself, and swung up into the crotch of the tree.

She climbed swiftly up to the third branch, stretched out across it, and reached for the paper. Her fingers did not quite reach, so she straightened up again, hanging onto the trunk to get her balance, and made a kind of down-sweeping lunge toward the piece of paper. She lost her balance and nearly missed the branch, and the wind she had created by her sudden movement blew the paper all the way to the end of the branch, where it teetered precariously but did not fall off.

Someone was coming across the curving bridge. She blew a couple of times on the paper and then stopped. She was going to have to go out on the branch. Maybe the paper is blank, she thought. I can hardly take a blank piece of paper to Ulric Henry, but she was already testing the weight of the branch with her hand. It seemed firm enough, and she began to edge out onto the dead branch, holding onto the

trunk until the last possible moment and then dropping into an inching crawl that brought her directly over the sidewalk. From there she was able to reach the paper easily.

The paper was part of a printout from a computer, torn raggedly at an angle. It read, "Wanted: Young woman who can generate language. Ulric H." The *ge* in "language" was missing, but otherwise the message made perfect sense, which she would have thought was peculiar if she had not been so surprised at the message. Her area of special study was language generation. She had spent all last week in class doing it, using all the rules of linguistic change on existing words: generalization and specialization of meaning, change in part of speech, shortening, and prepositional verb cluster-ing to create a new-sounding language. It had been almost impossible to do at first, but by the end of the week, she had greeted her professor with, "Good aft. I readed up my book taskings," without even thinking about it. She could certainly do the same thing with Ulric Henry, whom she had been wanting to meet anyway.

She had forgotten about the man she had seen coming across the bridge. He was almost to the tree now. In approxi-mately ten more steps he would look up and see her crouched there like an insane vulture. How will I explain this to my father if anyone sees me? she thought, and put a cautious foot behind her. She was still wondering when the branch gave way.

Mr. Mowen did not leave for the press conference until a quarter to eleven. He had still been on the phone with Char-lotte when Sally left, and when he had asked Charlotte to wait a minute so he could tell Sally to wait and he'd drive her over, Charlotte had called him a sexist tyrant and accused him of stifling Sally's dominant traits by repressive male psycho-logical intimidation. Mr. Mowen had had no idea what she was talking about.

Sally had swept up the glass and put a new light bulb in the bathroom before she left, but Mr. Mowen had decided not to tempt fate. He had shaved with a disposable razor instead. Leaning over to get a piece of toilet paper to put on the cut on his chin, he had cracked his head on the medicine cabinet door. After that, he had sat very still on the edge of the tub for nearly half an hour, wishing Sally were home so she could help him get dressed.

At the end of the half hour, Mr. Mowen decided that stress was the cause of the series of coincidences that had plagued him all morning (Charlotte had spoken Biofeedback for a couple of weeks) and that if he just relaxed, everything would be all right. He took several deep, calming breaths and stood up. The medicine cabinet was still open.

By moving very carefully and looking for hazards every-where, Mr. Mowen managed to get dressed and out to the car. He had not been able to find any socks that matched, and the elevator had taken him all the way to the roof, but Mr. Mowen breathed deeply and calmly each time, and he was even beginning to feel relaxed by the time he opened the door to the car.

He got into the car and shut the door. It caught the tail of his coat. He opened the door again and leaned over to pull the coat out of the way. One of his gloves fell out of his pocket onto the ground. He leaned over farther to rescue the glove and cracked his head on the armrest of the door.

He took a deep, rather ragged breath, snagged the glove, and pulled the door shut. He took the keys out of his pocket and inserted the car key in the ignition. The key chain snapped open and scattered the rest of his keys all over the floor of the front seat. When he bent over to pick them up, being very careful not to hit his head on the steering wheel, his other glove fell out of his pocket. He left the keys where they were and straightened up again, watching out for the turn signals and the sun visor. He turned the key with its still dangling key chain. The car wouldn't start.

Very slowly and carefully he got out of the car and went back up to the apartment to call Janice and tell her to cancel the press conference. The phone was busy.

\* \* \*

Ulric didn't see the young woman until she was nearly on top of him. He had been walking with his

head down and his hands jammed into the pockets of his parka, thinking about the press conference. He had left the apartment without his watch and walked very rapidly over to Research. He had been over an hour early, and no one had been there except one of Brad's fiancées whose name he couldn't remember. She had said, "Your biological clock is nonfunctional. Your bio-rhythms must be low today," and he had told her they were, even though he had no idea what they were talking about.

He had walked back across the oriental gardens, feeling desperate. He was not sure he could stand the press conference, even to warn Sally Mowen. Maybe he should forget about going and walk all over Chug water instead, grabbing young women by the arm and saying, "Do you speak English?"

While he was considering this idea, there was a loud snap overhead, and the young woman fell on him. He tried to get his hands out of his pockets to catch her, but it took him a moment to realize that he was under the cottonwood tree and that the snap was the sound of a branch breaking, so he didn't succeed. He did get one hand out of his pocket and he did take one bracing step back, but it wasn't enough. She landed on him full force, and they rolled off the sidewalk and onto the leaves. When they came to a stop, Ulric was on top of her, with one arm under her and the other one flung above her head. Her wool hat had come off and her hair was spread out nicely against the frost-rimed leaves. His hand was tangled in her hair. She was looking up at him as if she knew him. It did not even occur to him to ask her if she spoke English.

After a while it did occur to him that he was going to be late to the press conference. The hell with the press conference, he thought. The hell with Sally Mowen, and kissed her again. After a few more minutes of that, his arm began to go numb, and he disengaged his hand from her hair and put his weight on it to pull himself up.

She didn't move, even when he got onto his knees beside her and extended a hand to help her up. She lay there, looking up at him as if she were thinking hard about something. Then she seemed to come to a decision because she took his hand and let him pull her up. She pointed above and behind him. "The moon blues," she said.

"What?" he said. He wondered if the branch had cracked her on the head.

She was still pointing. "The moon blues," she said again. "It blueed up some last dark, but now it blues moreishly."

He turned to look in the direction she was pointing, and sure enough, the three-quarters moon was a bright blue in the morning sky, which explained what she was talking about, but not the way she was talking. "Are you all right?" he said. "You're not hurt, are you?" She shook her head. You never ask someone with a concussion if they are all right, he thought. "Does your head hurt?"

She shook her head again. Maybe she wasn't hurt. Maybe she was a foreign exchange consultant in Research. "Where are you from?" he said.

She looked surprised. "I failed down of the tree. You caught me with your face." She brushed the cottonwood leaves out of her hair and put her wool hat back on.

She understood everything he said, and she was definitely speaking English words even though the effect wasn't much like English. You caught me with your face. Irregular verb into regular. The moon blues. Adjective becomes verb. Those were both ways language evolved. "What were you doing in the tree?" he said, so she would talk some more.

"I hidged in the tree for cause people point you with their faces when you English oddishly."

English oddishly. "You're generating language, aren't you?" Ulric said. "Do you know Brad McAfee?"

She looked blank, and a little surprised, the way Brad had probably told her to when he put her up to this. He wondered which one of Brad's fiancées this was. Probably the one in programming. They had had to come up with all this gener-ated language somewhere. "I'm late for a press conference," he said

sharply, "as you well know. I've got to talk to Sally Mowen." He didn't put out his hand to help her up. "You can go tell Brad his little honeyfuggling scheme didn't work."

She stood up without his help and walked across the side-walk, past the fallen branch. She knelt down and picked up a scrap of paper and looked at it for a long time. He considered yanking it out of her hand and looking at it since it was probably Brad's language generation program, but he didn't. She folded it and put it in her pocket.

"You can tell him your kissing me didn't work," he said, which was a lie. He wanted to kiss her again as he said it, and that made him angrier than ever. Brad had probably told her he was wadgetty, that what he needed was a half hour in the leaves with her. "I'm still going to tell Sally."

She looked at him from the other side of the sidewalk.

"And don't get any ideas about trying to stop me." He was shouting now. "Because they won't work."

His anger got him over the curving bridge. Then it occurred to him that even if she was one of Brad's fiancées, even if she had been hired to kiss him in the leaves and keep him from going to the press conference, he was in love with her, and he went tearing back, but she was nowhere in sight.

At a little after eleven Janice got a call from Gail in publicity. "Where is Mr. Mowen? He hasn't shown up, and my media credibility is effectively nonfunctional."

"I'll try to call him at home," Janice said. She put Gail on hold and dialed Mr. Mowen's apartment. The line was busy. When she punched up the hold button to tell Gail that, the line went dead. Janice tried to call her back. The line was busy.

She typed in the code for a priority that would override whatever was on Mr. Mowen's home terminal. After the code, she typed, "Call Janice at office." She looked at it for a minute, then back-erased and typed, "Press conference. Research. Eleven a.m.," and pressed RUN. The screen clicked once and displayed the preliminary test results of side effects on the waste-emissions project. At the bottom of the screen, she read, "Tangential consequences statistically negligible."

"You want to bet?" Janice said.

She called programming. "There's something wrong with my terminal," she said to the woman on the line.

"This is Sue in peripherals rectification. Is your problem in implementation or hardware?"

She sounded just like Gail in publicity. "You wouldn't know Brad McAfee, would you?" she said.

"He's my fiancee," Sue said. "Why?"

Janice sighed. "I keep getting readouts that have nothing to do with what I punch in," Janice said.

"Oh, then you want hardware repair. The number's in your terminal directory," she said, and hung up.

Janice called up the terminal directory. At first nothing happened. Then the screen clicked once and displayed some-thing titled, "Project Sally." Janice noticed Lynn Saunders's name three-quarters of the way down the screen, and Sally Mowen's at the bottom. She started at the top and read it all the way through. Then she typed in PRINT and read it again as it came rolling out of the printer. When it was done, she tore off the sheet carefully, put it in a file folder, and put the file folder in her desk.

"I found your glove in the elevator," Sally said when she came in. She looked terrible, as if the experience of finding Mr. Mowen's glove had been too much for her. "Is the press conference over?"

"I didn't go," Mr. Mowen said. "I was afraid I'd run into a tree. Could you drive me over to the office? I told Janice I'd be there by nine and it's two-thirty."

"Tree?" Sally said. "I fell out of a tree today. On a linguist."

Mr. Mowen put on his overcoat and fished around in the pockets. "I've lost my other glove," he said. "That makes fifty-eight instances of bad luck I've had already this morning, and I've been sitting stock still for the last two hours. I made a list. The pencil broke, and the eraser, and I erased a hole right through the paper, and I didn't even count those." He put the single glove in his coat pocket.

Sally opened the door for him, and they went down the hall to the elevator. "I never should have said that about the moon," she said. "I should have said hello. Just a simple hello. So what if the note said he wanted someone who could generate language? That didn't mean I had to do it right then, before I even told him who I was."

Mr. Mowen punched his security code into the elevator. The REJECT light came on. "Fifty-nine," Mr. Mowen said. "That's too many coincidences to just be a coincidence. And all bad. If I didn't know better, I'd say someone was trying to kill me."

Sally punched in her security code. The elevator slid open. "I've been walking around for hours, trying to figure out how I could have been so stupid," Sally said. "He was on his way to meet me. At the press conference. He had something to tell me. If I'd just stood up after I fell on him and said, 'Hello, I'm Sally Mowen, and I've found this note. Do you really want someone who can generate language?' but, oh, no, I have to say, 'The moon blues.' I should have just kept kissing him and never said anything. But, oh, no, I couldn't let well enough alone."

Mr. Mowen let Sally push the floor button in the elevator so no more warning lights would flash on. He also let her open the door of the apartment building. On the way out to the car, he stepped in some gum.

"Sixty. If I didn't know better, I'd say your mother was behind this," Mr. Mowen said. "She's coming up here this afternoon. To see if I'm minimizing your self-realization potential with my chauvinistic role expectations. That should count for a dozen bad coincidences all by itself." He got in the car, hunching far back in the seat so he wouldn't crack his head on the sun visor. He peered out the window at the gray sky. "Maybe there'll be a blizzard and she won't be able to get up from Cheyenne."

Sally reached for something under the driver's seat. "Here's your other glove," she said, handed it over to him, and started the car. "That note was torn in half. Why didn't I think about the words that were missing instead of deciding the message was all there? He probably wanted somebody who could generate electricity and speak a foreign language. Just because I liked his picture and I thought he might speak English I had to go and make a complete fool out of myself."

It started to snow halfway to the office. Sally turned on the windshield wipers. "With my luck," Mr. Mowen said, "there'll be a blizzard, and I'll be snowed in with Charlotte." He looked out the side window at the smokestacks. They were shooting another wavery blue blast into the air. "It's the waste-emissions project. Somehow it's causing all these damn coincidences."

Sally said, "I look and look for someone who speaks decent English, and when I finally meet him, what do I say? 'You caught me with your face.' And now he thinks some-body named Brad McAfee put me up to it to keep him from getting to a press conference, and he'll never speak to me again. Stupid! How could I have been so stupid?"

"I never should have let them start the project without more testing," Mr. Mowen said. "What if we're putting too much ozone into the ozone layer? What if this bicarbonate of soda fallout is doing something to people's digestion? No measurable side effects, they said. Well, how do you measure bad luck? By the fatality rates?"

Sally had pulled into a parking space directly in front of Mr. Mowen's office. It was snowing hard now. Mr. Mowen pulled on the glove Sally had handed him. He fished in his pocket for the other one. "Sixty-one," he said. "Sally, will you go in with me? I'll never get the elevator to work."

Sally walked with him into the building. On the way up in the elevator, she said, "If you're so



convinced the waste-emissions project is causing your bad luck, why don't you tell Research to turn it off?"

"They'd never believe me. Whoever heard of coincidences as a side effect of trash?"

They went into the outer office. Janice said, "Hello!" as if they had returned from an arctic expedition. Mr. Mowen said, "Thanks, Sally. I think I can make it from here." He patted her on the shoulder. "Why don't you go explain what hap-pened to this young man and tell him you're sorry?"

"I don't think that would work," Sally said. She kissed him on the cheek. "We're in bad shape, aren't we?"

Mr. Mowen turned to Janice. "Get me Research, and don't let my wife in," he said, went into his office, and shut the door. There was a crash and the muffled sound of Mr. Mowen swearing.

Janice sighed. "This young man of yours," she said to Sally. "His name wouldn't be Brad McAfee, would it?"

"No," Sally said, "but he thinks it is." On the way to the elevator she stopped and picked up Mr. Mowen's glove and put it in her pocket.

After Mr. Mowen's secretary hung up, Sue called Brad. She wasn't sure what the connection was between Brad and Mr. Mowen's secretary's terminal not working, but she thought she'd better let him know that Mr. Mowen's secretary knew his name.

There was no answer. She tried again at lunch and again on her afternoon break. The third time the line was busy. At a quarter of three her supervisor came in and told Sue she could leave early since heavy snow was predicted for rush hour. Sue tried Brad's number one more time to make sure he was there. It was still busy.

It was a good thing she was getting off early. She had only worn a sweater to work, and it was already snowing so hard she could hardly see out the window. She had worn sandals, too. Somebody had left a pair of bright blue moon boots in the coatroom, so she pulled those on over her sandals and went out to the parking lot. She wiped the snow off the windshield with the sleeve of her sweater, and started over to Brad's apartment.

"You didn't meander on over to the press conference," Brad said when Ulric came in.

"No," Ulric said. He didn't take off his coat.

"Old Man Mowen didn't either. Which was right lucky, because I got to jaw with all those reporters instead of him. Where did you go off to? You look colder than an otter on a snowslide."

"I was with the 'gal' you found for me. The one you had jump me so I wouldn't go to the press conference and ruin your chances with Sally Mowen."

Brad was sitting at his terminal. "Sally wasn't there, which turned out to be right lucky because I met this reporter name of Jill who..." He turned around and looked at Ulric. "What gal are you talking about?"

"The one you had conveniently fall out of a tree on me. I take it she was one of your spare fiancées. What did you do? Make her climb out of the apartment window?"

"Now let me get this straight. Some gal fell out of that old cottonwood on top of you? And you think I did it?"

"Well, if you didn't, it was an amazing coincidence that the branch broke just as I was passing under it and an even more amazing coincidence that she generated language, which was just what that printout you came up with read. But the most amazing coincidence of all is the punch in the nose you're going to get right now."

"Now, don't get so dudfoozled. I didn't drop no gal on you, and if I'm lyin', let me be kicked to death by grasshop-pers. If I was going to do something like that, I'd have gotten you one who could speak good English, like you wanted, not... what did you say she did? Generated language?"

"You expect me to believe it's all some kind of coinci-dence?" Ulric shouted. "What kind of... of... dodunk do you take me for?"

"I'll admit it is a pretty seldom thing to have happen," Brad said thoughtfully. "This morning I found me a hundred dollar bill on the way to the press conference. Then I meet this reporter Jill and we get to talking and we have a whole lot in common like her favorite movie is *Lay that Rifle Down* with Judy Canova in it, and then it turns out she's Sally Mowen's roommate last year in college."

The phone rang. Brad picked it up. "Well, ginger peachy. Come on over. It's the big housing unit next to the oriental gardens. Apartment 6B." He hung up the phone. "Now that's just what I been talking about. That was that gal reporter on the phone. I asked her to come over so's I could honeyfuggle her into introducing me to Sally, and she says she can't 'cause she's gotta catch a plane outta Cheyenne. But now she says the highway's closed, and she's stuck here in Chugwater. Now that kind of good luck doesn't happen once in a blue moon."

"What?" Ulric said, and unclenched his fists for the first time since he'd come into the room. He went over to look out the window. He couldn't see the moon that had been in the sky earlier. He supposed it had long since set, and anyway it was starting to snow. "The moon blues," he said softly to himself.

"Since she is coming over here, maybe you should skedad-dle so as not to spoil this run of good luck I am having."

Ulric pulled *Collected American Slang* out of the bookcase and looked up, "moon, blue" in the index. The entry read, "Once in a blue moon: rare, as an unusual coincidence, orig. rare as a blue moon; based on the rare occurrence of a blue-tinted moon from aerosol particulates in upper atmo-sphere; see Superstitions." He looked out the window again. The smokestacks sent another blast up through the gray clouds.

"Brad," he said, "is your waste-emissions project putting aerosols into the upper atmosphere?"

"That's the whole idea," Brad said. "Now I don't mean to be bodacious, but that gal reporter's going to be coming up here any minute."

Ulric looked up "Superstitions." The entry for "moon, blue" read, "Once in a blue moon; folk saying attrib. SE America; local superstition linked occurrence of blue moon and unusual coincidental happenings; origin unknown."

He shut the book. "Unusual coincidental happenings," he said. "Branches breaking, people falling on people, people finding hundred dollar bills. All of those are coincidental happenings." He looked up at Brad. "You wouldn't happen to know how that saying got started, would you?"

"Bodacious? It probably was made up by some feller who was waiting on a gal and this other guy wouldn't hotfoot it out of there so's they could be alone."

Ulric opened the book again. "But if the coincidences were bad ones, they would be dangerous, wouldn't they? Some-body might get hurt."

Brad took the book out of his hands and shoved Ulric out the door. "Now git!" he said. "You're givin' me the flit-flats again."

"We've got to tell Mr. Mowen. We've got to shut it off," Ulric said, but Brad had already shut the door.

"Hello, Janice," Charlotte said. "Still an oppressed fe-male in a dehumanizing male-dominated job, I see."

Janice hung up the phone. "Hello, Charlotte," she said. "Is it snowing yet?"

"Yes," Charlotte said, and took off her coat. It had a red button pinned to the lapel. It read, "NOW... or else!"

"We just heard on the radio they've closed the highway. Where's your reactionary chauvinist employer?"

"Mr. Mowen is busy," Janice said, and stood up in case she needed to flatten herself against Mr. Mowen's door to keep Charlotte out.

"I have no desire to see that last fortress of sadistic male dominance," Charlotte said. She took off her gloves and rubbed her hands together. "We practically froze on the way up. Lynn Saunders rode back up with me. Her mother isn't getting a divorce after all. Her bid for independence crumbled at the first sign of societal disapproval, I'm afraid. Lynn had a message on her terminal to call you, but she couldn't get through. She said for me to tell you she'd be over as soon as she checks in with her fiance."

"Brad McAfee," Janice said.

"Yes," Charlotte said. She sat down in the chair opposite Janice's desk and took off her boots. "I had to listen to her sing his praises all the way from Cheyenne. Poor brainwashed victim of male oppressionist propaganda. I tried to tell her she was only playing into the hands of the entrenched male socio-sexual establishment by getting engaged, but she wouldn't listen." She stopped massaging her stockinged foot. "What do you mean, he's busy? Tell that arrogant sexist pig I'm here and I want to see him."

Janice sat back down and took the file folder with "Project Sally" in it out of her desk drawer. "Charlotte," she said, "before I do that, I was wondering if you'd give me your opinion of something."

Charlotte padded over to the desk in her stockinged feet. "Certainly," she said. "What is it?"

Sally wiped the snow off the back window with her bare hands and got in the car. She had forgotten about the side mirror. It was caked with snow. She rolled down the window and swiped at it with her hand. The snow landed in her lap. She shivered and rolled the window back up, and then sat there a minute, waiting for the defroster to work and blowing on her cold, wet hands. She had lost her gloves somewhere.

No air at all was coming out of the defroster. She rubbed a small space clean so she could see to pull out of the parking space and edged forward. At the last minute she saw the ghostlike form of a man through the heavy curtain of snow and stamped on the brake. The motor died. The man she had almost hit came around to the window and motioned to her to roll the window down. It was Ulric.

She rolled the window down. More snow fell in her lap. "I was afraid I'd never see you again," Ulric said.

"I..." Sally said, but he waved her silent with his hand.

"I haven't got much time. I'm sorry I shouted at you this morning. I thought... anyway, now I know that isn't true, that it was a lot of coincidences that... anyway I've got to go do something right now that can't wait, but I want you to wait right here for me. Will you do that?"

She nodded.

He shivered and stuck his hands in his pockets. "You'll freeze to death out here. Do you know where the housing unit by the oriental gardens is? I live on the sixth floor, apartment

B. I want you to wait for me there. Will you do that? Do you have a piece of paper?"

Sally dug in her pocket and pulled out the folded scrap of paper with, "Wanted: Young woman," on it. She looked at it a minute and then handed it to Ulric. He didn't even unfold it. He scribbled some numbers on it and handed it back to her.

"This is my security code," he said. "You have to use it for the elevator. My roommate will let you into the apartment." He stopped and looked hard at her. "On second thought, you'd better wait for me in the hall. I'll be back as soon as I can." He bent and kissed her through the window. "I don't want to lose you again."

"I..." Sally said, but he had already disappeared into the snow. Sally rolled the window up. The windshield was covered with snow again. She put her hand up to the de-froster. There was still no air coming out. She turned on the windshield wipers. Nothing happened.

Gail didn't get back to her office until after two. Reporters had hung around after the press conference asking her questions about Mr. Mowen's absence and the waste-emissions project. When she did make it back to the office, they began calling, and she didn't get started on her press conference publicity releases until nearly three. She almost immediately ran into a problem. Her notes mentioned particulates, and she knew Brad had said what kind<sup>^</sup> but she hadn't written it down. She couldn't let the report go without specifying which particulates or the press would jump to all kinds of alarming conclusions. She called Brad. The line was busy. She stuffed everything into a large manila envelope and started over to his apartment to ask him.

"Did you get Research yet?" Mr. Mowen said when Janice came into his office.

"No, sir," Janice said. "The line is still busy. Ulric Henry is here to see you."

Mr. Mowen pushed against his desk and stood up. The movement knocked over Sally's picture and a pencilholder full of pencils. "You might as well send him in. With my luck, he's probably found out why I hired him and is here to quit."

Janice went out, and Mr. Mowen tried to gather up the pencils that had scattered all over his desk and get them back in the pencilholder. One rolled toward the edge, and Mr. Mowen leaned over the desk to catch it. Sally's picture fell over again. When Mr. Mowen looked up, Ulric Henry was watching him. He reached for the last pencil and knocked the receiver off the phone with his elbow.

"How long has it been like this?" Ulric said.

Mr. Mowen straightened up. "It started this morning. I'm not sure I'm going to live through the day."

"That's what I was afraid of," Ulric said, and took a deep breath. "Look, Mr. Mowen, I know you hired me to be a linguist, and I probably don't have any business interfering with Research, but I think I know why all these things are happening to you."

I hired you to marry Sally and be vice-president in charge of saying what you mean, Mr. Mowen thought, and you can interfere in anything you like if you can stop the ridiculous things that have been happening to me all day.

Ulric pointed out the window. "You can't see it out there because of the snow, but the moon is blue. It's been blue ever since you turned on your waste-emissions project. 'Once in a blue moon' is an old saying used to describe rare occurrences. I think the saying may have gotten started because the number of coincidences increased every time there was a blue moon. I think it may have something to do with the particulates in the stratosphere doing something to the laws of probability. Your waste-emissions project is pumping particulates in the stratosphere right now. I think these coincidences are a side effect."

"I *knew* it," Mr. Mowen said. "It's Walter Hunt and the safety pin all over again. I'm going to call Research." He reached for the phone. The receiver cord caught on the edge of the desk. When he yanked it, the phone went clattering over the edge, taking the pencilholder and Sally's picture with it. "Will you call Research for me?"

"Sure," Ulric said. He punched in the number and then handed the receiver to Mr. Mowen.

Mr. Mowen thundered, "Turn off the waste-emissions project. Now. And get everyone connected

with the project over here immediately." He hung up the phone and peered out the window. "Okay. They've turned it off," he said, turning back to Ulric. "Now what?"

"I don't know," Ulric said from the floor where he was picking up pencils. "I suppose as soon as the moon starts to lose its blue color, the laws of probability will go back to normal. Or maybe they'll rebalance themselves, and you'll have all good luck for a day or two." He put the pencilholder back on the desk and picked up Sally's picture.

"I hope it changes before my ex-wife gets back," Mr. Mowen said. "She's been here once already, but Janice got rid of her. I knew she was a side effect of some kind."

Ulric didn't say anything. He was looking at the picture of Sally.

"That's my daughter," Mr. Mowen said. "She's an English major."

Ulric stood the picture on the desk. It fell over, knocking the pencilholder onto the floor again. Ulric dived for the pencils.

"Never mind about the pencils," Mr. Mowen said. "I'll pick them up after the moon gets back to normal. She's home for Thanksgiving vacation. You might run into her. Her area of special study is language generation."

Ulric straightened up and cracked his head on the desk. "Language generation," he said, and walked out of the office.

Mr. Mowen went out to tell Janice to send the Research people in as soon as they got there. One of Ulric's gloves was lying on the floor next to Janice's desk. Mr. Mowen picked it up. "I hope he's right about putting a stop to these coincidences by turning off the stacks," he said. "I think this thing is catching."

Lynn called Brad as soon as Charlotte dropped her off. Maybe he knew why Mr. Mowen's secretary wanted to see her. The line was busy. She took off her parka, put her suitcase in the bedroom, and then tried again. It was still busy. She put her parka back on, pulled on a pair of red mittens, and started across the oriental gardens to Brad's apartment.

"Are those nincompoops from Research here?" Mr. Mowen asked Janice.

"Yes, sir. All but Brad McAfee. His line is busy."

"Well, put an override on his terminal. And send them in."

"Yes, sir," Janice said. She went back to her desk and called up a directory on her terminal. To her surprise, she got it. She wrote down Brad's code and punched in an override. The computer printed ERROR. I knew it was too good to last, Janice thought. She punched the code again. This time the computer printed OVERRIDE IN PLACE. Janice thought a minute, then decided that whatever the override was, it couldn't be more important than Mr. Mowen's. She punched the code for a priority override and typed, "Mr. Mowen wants to see you immediately." The computer immediately confirmed it.

Exhilarated by her success, Janice called Brad's number again. He answered the phone. "Mr. Mowen would like to see you immediately," she said.

"I'll be there faster than blue blazes," Brad said, and hung up.

Janice went in and told Mr. Mowen Brad McAfee was on the way. Then she herded the Research people into his office. When Mr. Mowen stood up to greet them, he didn't knock over anything, but one of the Research people managed to knock over the pencils again. Janice helped him pick them up.

When she got back to her desk she remembered that she had superseded an override on Brad's terminal. She wondered what it was. Maybe Charlotte had gone to his apartment and poisoned him and

then put an override on so he couldn't call for help. It was a comforting thought somehow, but the override might be something important, and now that she had gotten him on the phone there was really no reason to leave the priority override in place. Janice sighed and typed in a cancellation. The computer immediately confirmed it,

Jill opened the door to Brad's apartment building and stood there for a minute trying to get her breath. She was supposed to have driven back to Cheyenne tonight, and she had barely made it across Chugwater. Her car had slid sideways in the street and gotten stuck, and she had finally left it there and come over here to see if Brad could help her put her chains on. She fished clumsily in her purse for the numbers Brad had written down for her so she could use the elevator. She should have taken her gloves off.

A young woman with no gloves on pushed open the door and headed for one of the two elevators, punched some numbers, and disappeared into the nearer elevator. The doors shut. She should have gone up with her. Jill fished some more and came up with several folded scraps of paper. She tried to unfold the first one, gave up, and balanced them all on one hand while she tried to pull her other glove off with her teeth.

The outside door opened, and a gust of snowy air blew the papers out of her hand and out the door. She dived for them, but they whirled away in the snow. The man who had opened the door was already in the other elevator. The doors slid shut. Oh, for heaven's sake.

She looked around for a phone so she could call Brad and tell him she was stranded down here. There was one on the far wall. The first elevator was on its way down, between four and three. The second one was on six. She walked over to the phone, took both her gloves off and jammed them in her coat pocket, and picked up the phone.

A young woman in a parka and red mittens came in the front door, but she didn't go over to the elevators. She stood in the middle of the lobby brushing snow off her coat. Jill rummaged through her purse for a quarter. There was no change in her wallet, but she thought there might be a couple of dimes in the bottom of her purse. The second elevator's doors slid open, and the mittened woman hurried in.

She found a quarter in the bottom of her purse and dialed Brad. The line was busy. The first elevator was on six now. The second one was down in the parking garage. She dialed Brad's number again.

The second elevator's doors slid open. "Wait!" she said, and dropped the phone. The receiver hit her purse and knocked its contents all over the floor. The outside door opened again, and snow whirled in. "Push the hold button," said the middle-aged woman who had just come in from outside. She had a red "NOW... or else!" button pinned to her coat, and she was clutching a folder to her chest. She knelt down and picked up a comb, two pencils, and Jill's checkbook.

"Thank you," she said gratefully.

"We sisters have to stick together," the woman said grimly. She stood up and handed the things to Jill. They got into the elevator. The woman with the mittens was holding the door. There was another young woman inside, wearing a sweater and blue moon boots.

"Six please," Jill said breathlessly, trying to jam every-thing back into her purse. "Thanks for waiting. I'm just not all together today." The doors started to close.

"Wait!" a voice said, and a young woman in a suit and high heels, with a large manila envelope under her arm, squeezed in just as the door shut. "Six please," she said. "The wind chill factor out there has to be twenty below. I don't know where my head was to try to come over and see Brad in weather like this."

"Brad?" the young woman in the red mittens said.

"Brad?" Jill said.

"Brad?" the young woman in the blue moon boots said.

"Brad McAfee," the woman with the "NOW... or else!" button said grimly.

"Yes," the young woman in high heels said, surprised. "Do you all know him? He's my fiance."

Sally punched in her security code, stepped in the elevator, and pushed the button for the sixth floor. "Ulric, I want to explain what happened this morning," she said as soon as the door closed. She had practiced her speech all the way over to Ulric's housing unit. It had taken her forever to get here. The windshield wipers were frozen and two cars had slid sideways in the snow and created a traffic jam. She had had to park the car and trudge through the snow across the oriental gardens, but she still hadn't thought of what to say.

"My name is Sally Mowen, and I don't generate lan-guage." That was out of the question. She couldn't tell him who she was. The minute he heard she was the boss's daugh-ter, he would stop listening.

"I speak English, but I read your note, and it said you wanted someone who could generate language." No good. He would ask, "What note?" and she would haul it out of her pocket, and he would say, "Where did you find this?" and she would have to explain what she was doing up in the tree. She might also have to explain how she knew he was Ulric Henry and what she was doing with his file and his picture, and he would never believe it was all a coincidence.

Number six blinked on, and the door of the elevator opened. I can't, Sally thought, and pushed the lobby button. Half-way down she decided to say what she should have said in the first place. She pushed six again.

"Ulric, I love you," she recited. "Ulric, I love you." Six blinked. The door opened. "Ulric," she said. He was stand-ing in front of the elevator, glaring at her.

"Aren't you going to say something?" he said. "Like 'I withspeak myself?' That's a nice example of Germanic com-pounding. But of course you know that. Language generation is your area of special study, isn't that right, Sally?"

"Ulric," Sally said. She took a step forward and put her hand on the elevator door so it wouldn't close.

"You were home for Thanksgiving vacation and you were afraid you'd get out of practice, is that it? So you thought you'd jump out of a tree on the company linguist just to keep your hand in."

"If you'd shut up a minute, I'd explain," Sally said.

"No, that's not right," Ulric said. "It should be 'quiet up' or maybe 'mouth-close you.' More compounding."

"Why did I ever think I could talk to you?" Sally said. "Why did I ever waste my time trying to generate language for you?"

"For me?" Ulric said. "Why in the hell did you think I wanted you to generate language?"

"Because... oh, forget it," Sally said. She punched the lobby button. The door started to shut. Ulric stuck his hand in the closing doors and then snatched them free and pressed the hold button. Nothing happened. He jammed in four numbers and pressed the hold button again. It gave an odd click and began beeping, but the doors opened again.

"Damn it," Ulric said. "Now you've made me punch in Brad's security code, and I've set off his stupid override."

"That's right," Sally said, jamming her hands in her pock-ets. "Blame everything on me. I suppose I'm the one who left that note in the tree saying you wanted somebody who could generate language?"

The beeping stopped. "What note?" Ulric said, and let go of the hold button.

Sally pulled her hand out of her pocket to press the lobby button again. A piece of paper fell out of her pocket. Ulric stepped inside as the doors started to close and picked up the piece of paper. After a minute, he said, "Look, I think I can explain how all this happened."

"You'd better make it snappy," Sally said. "I'm getting out when we get to the lobby."

As soon as Janice hung up the phone Brad grabbed his coat. He had a good idea of what Old Man Mowen wanted him for. After Ulric had left, Brad had gotten a call from *Time*. They'd talkified for over half an hour about a photogra-pher and a four-page layout on the waste-emissions project. He figured they'd call Old Man Mowen and tell him about the article, too, and sure enough, his terminal had started beeping an override before he even hung up. It stopped as he turned toward the terminal, and the screen went blank, and then it started beeping again, double-quick, and sure enough, it was his pappy-in-law to be. Before he could even begin reading the message, Janice called. He told her he'd be there faster than blue blazes, grabbed his coat, and started out the door.

One of the elevators was on six and just starting down. The other one was on five and coming up. He punched his secu-rity code in and put his arm in the sleeve of his overcoat. The lining tore, and his arm went down inside it. He wrestled it free and tried to pull the lining back up to where it belonged. It tore some more.

"Well, dadfetch it!" he said loudly. The elevator door opened. Brad got in, still trying to get his arm in the sleeve. The door closed behind him.

The panel in the door started beeping. That meant an override. Maybe Mowen was trying to call him back. He pushed the DOOR OPEN button, but nothing happened. The elevator started down. "Dagnab it all," he said.

"Hi, Brad," Lynn said. He turned around.

"You look a mite wadgetty," Sue said. "Doesn't he, Jill?"

"Right peaked," Jill said.

"Maybe he's got the flit-flats," Gail said.

Charlotte didn't say anything. She clutched the file folder to her chest and growled. Overhead, the lights flickered, and the elevator ground to a halt.

**FOR IMMEDIATE RELEASE:** Mowen Chemical today announced temporary finalization of its pyrolitic strato-spheric waste-emissions program pending implementation of an environmental impact verification process. Lynn Saunders, director of the project, indicated that facilities will be tempo-rarily deactivated during reorientation of predictive assess-ment criteria. In an unrelated communication, P.B. Mowen, president of Mowen Chemical, announced the upcoming nup-tials of his daughter Sally Mowen and Ulric Henry, vice-president in charge of language effectiveness documentation.

*SUMMER SOLSTICE* Charles L Harness

*We turn now to the past, more than two thousand years ago in Egypt, when Eratosthenes was first proving that our world is round. His contention (which he worked out mathematically to a surprising degree of accuracy) was of course heresy at the time... but what if an alien from an advanced star-race had been present to aid Eratosthenes? "Summer Solstice" tells the results with delightful historical accuracy, plus more.*

*Charles L. Harness has quietly been writing science fiction stories for nearly forty years; they've all been outstanding, in-cluding such novels as The Rose, Firebird, and The Venetian Court.*



## 1. The Ship Is Hit

Even as the sleeper lid rose, Khor could see the console lights flashing and he could hear the intermittent buzzer.

The break-sleep alarm. Very often the last sound some spacemen ever heard. His blood pressure began to mount. He wasn't even completely awake, and his body was doing this to him. He shuddered. He would not see home again. Never again the stern Zoology Supervisor. ("What, Khor, *still* no featherless biped?" And Queva... she had taken the sleep, to wait for him. Beloved Queva. She had given him the key to her casket. "You alone will open. Else I sleep forever." No, Queva, no, no, no... I may never return. But she had done it. The female mind... beyond all comprehension. Well, my friend, what now?)

He deciphered the alarm code mentally as he clambered up from the cushions: the hydraulic system had been hit, aft. Bad, bad. He had a dreadful premonition of what he would find. Get to it. Know the worst.

He ran a finger around his helmet seal, brushing his scapular feathers. Still air-tight. Next he sat on the side of the casket and wondered whether he should remove his helmet. He decided to leave it on. At least for the moment he wouldn't have to make any decisions about cabin pressure and oxygen.

The alarms—all of them—had now become impatient with him. They had moved from console and wall and had invaded his guts and brain like barbed parasites. "Xeris and Mord," he groaned.

He reached for his heat-suit and simultaneously glanced at the ceiling meter. How long had he been under? Forty cycles. Long time. He closed the suit up and clumped over to the console. First turn off *thatpflicht* alarm. Now back to the tail of the ship.

Air pressure apparently holding. Which meant the hole in the ship wall self-sealed in good order. The missile—a meteorite?—couldn't have been too big. So why hadn't internal automatic repair handled the problem? As he rounded the passage, the answer literally hit him in the face. A jet of oil struck his visor. The pin hackles on his neck and face stood out in panic. By reflex his hands grabbed the valve wheel and extinguished the flow. He wiped his visor with his sleeve. "By the egg that bore me!" He felt sick. How much fluid had he lost? From the looks of the balls of glop floating weightlessly around him, at least half. How was it possible? Not just one leak? He played the inspection light along the piping array. The whole tubular system was dripping. Some of the holes were big enough to see. Others were microscopic, hiding behind tiny globules of fluid. The meteorite had evidently struck a brittle section of the ship wall, which then had imploded into a thousand high-velocity fragments. He had warned Maintenance last time in. The skin was fatiguing. The chief mechanic had laughed at him.

He sighed and looked around. Oil everywhere. Mocking clusters. All sizes.

Where could he find make-up fluid in this Zaforsaken corner of the galaxy? And repair-tape? He'd used the last of his tape on the solar batteries... how many cycles ago?

"Khor," he muttered gloomily, "you sorry misbegotten space scavenger, you are in serious trouble." He'd have to land. Very funny. (You had to have a sense of humor for these collection missions.) To land, he'd have to find a planet. And not just any planet. One with a civilization sufficiently advanced to supply his needs.

He shuffled back through the collection area, toward the control room. He passed the cage with the ten-legged carnivorous reptile, now quietly sleeping its drugged sleep in the corner. Past the telepathic tree that had tried to charm him into its gluey branches as its next meal. Past the floating head-size ball of fluff that seemed to have no mouth, no food, and no alimentary system, but which had doubled in size since he had first captured it on Sargus-VI. And finally the empty cage: "Featherless biped." Where in the

name of Xippor the Remorseless was he to find such an unlikely specimen? You can at least *try*, the Supervisor had admon-ished him. There are a lot of unexplored planets out there.

And so to the pilot-console, where he activated the chart screen. Nearest star... there we are. Yellow, medium size. Third generation. Has all ninety-two elements. How about planets? Big one. Too big. And too far out. Also that one with the gorgeous ring. No. The red one? No air. Next. There's one... plenty of water, probably good air. Life? Maybe. Civilization? Maybe. Go on. Two more. Both too hot. Back up to III. No choice, really. I'm going in.

## 2. Ne-tiy Introspects

Ne-tiy knelt and stared into the mirroring surface of the lotus-pool. She liked what she saw: a young woman of excel-lent figure, with a face possibly bordering on the beautiful. That figure was sheathed in the classic linen tube, falling almost to her sandals, and supported by broad shoulder straps covering her breasts.

She touched her cheeks just below the eyes. There was a certain sadness about her eyes. She would like to use a little kohl at the corners for cheerful emphasis, and perhaps a little red iron oxide to highlight her cheeks, but her owner, the great priest, had strictly forbidden it. "You live for one thing, and that is not to adorn yourself." And what was that one thing? If and when the priest gave the signal, she was to offer the poisoned wine to a certain person.

She tried hard not to think about it. But it was no use. She could think of nothing else.

The priest, who served only the sun-god Horus, had bought her in the slave market at On, ten years ago. Her parents had been imprisoned for debt, and she had been turned over to the temple of the cat goddess, Bast. And then things had become blurred. She remembered she had cried a lot. Things had been done to her. In the end she knew only fear, hate, and that she was going to endure.

And then the great inquisitor priest, Hor-ent-yotf, had bought her, and had taught her certain skills. "You will enter the house of the Librarian," he had said. "You will listen to all that he does and says."

"Why, my lord?"

"Why is not your concern."

But she knew why. Hor-ent-yotf (the name meant avenger of the father of Horus) was licensed by the Greek pharaoh to sniff out heresy and impiety in the low and the high. Espe-cially in the high, for they were the most influential. Any-thing demeaning the sun-god Horus was suspect. The penalty was death. She shivered.

If she were called upon to kill Eratosthenes, what would she do?

For six months she had lived as a trusted servant in his house. He knew horses, and had taught her. She had driven his chariot. He liked that. His family raised thoroughbreds, back in Cyrene, where the pasturage was rich and blue-green. When she drove with him, her body rubbed against his within the light wicker framework of the vehicle. Something had awakened within her. And now it had come to this: to be near him was torture, and not to be near him was worse.

She stared down into the pool and passed her fingertips slowly over her abdomen. "How can I ever bear his child? He doesn't know I exist. I need to be rich. I need exalted office. High priestess of some god or other. But it is hope-less, for I am nothing, and I will remain nothing."

A shadow fell on the water. She arose and turned slowly, impassively, head bowed. She did not need to look up. She saw without seeing; the shaven bald pate, eyes lengthened by dark cosmetics, the thin pleated linen skirt with cape, the leopard skin, complete with claws, tail, and fanged, glaring head. His hands hung at his sides. Her eyes rested on his long fingernails.

On his right hand he wore three deaths, shaped as rings, each with its tiny jeweled capsule. First was

the copper ring, which had a capsule shaped as Set, the god of darkness. On the middle finger was the silver ring, bearing the face of the evil goddess Sekhmet, who slew Osiris. Finally was the gold ring, on his fourth finger. Its capsule was a sardonic bow to the Greek conquerors, for it bore the face of their god Charon, who ferried their dead across the River Styx to Hades.

The faint north wind moved a sharp blanket of incense around her face. She realized that it had been the smell that had announced him.

"Where is he?" said Hor-ent-yotf.

"He has gone forth into the streets, my lord."

"When does he return?"

" In the afternoon."

"I have reason to think he has found the directions for the tomb of the heretic pharaoh Tut-ankh-amun. Has he mentioned this?"

"No, my lord."

"Be watchful."

"Yes, my lord."

"There is another matter. In a secluded courtyard at the Library he is making a measurement of the disc of Horus. Listen carefully. Let me know if he says anything about it."

"As my lord wishes." She listened to the sandals crunching away down the pea-gravel path. Then she turned back to the pool, as though trying to hide in the beauty of the flowered rim. The Greeks had brought strange and beautiful flowers to Alexandria: asphodels, marigolds, a tiny claret-colored vetch, irises purple and deep blue. Purple and white anemones, scarlet poppies.

She wished she were a simple, mindless blossom, required only to be beautiful.

Ah, Hor-ent-yotf, great Avenger, thou demi-god, I know you well. Your mother was impregnated by the ka of Horus the hawk-god, divine bearer of the sun disc. Flights of golden hawks whirred over your house at your birth, calling and whistling to you. So it was said. As a boy apprentice in the temple at Thebes, you saw the glowing god descend from the sun, and he spoke to you. Avenge me, the god said. Find the tomb of Tut-ankh-amun, who married the third daughter of the heretic pharaoh Ikhnaton, who denied me. Destroy that tomb, and all that is within.

So it was said.

She shivered again.

### **3. Rabbi Ben Shem**

Eratosthenes had been wandering the streets for an hour, vaguely aware of the sights, sounds, and smells of Alexandria at high noon.

The Brucheum, the royal quarter of the great city, was totally Greek, as Greek as Athens, or Corinth, or even far Cyrene, where he was born. As thoroughly Greek as the great Alexander had intended, when he strode about this shore opposite the Isle of Pharos, a bare eighty years ago and said: build the walls here, the temples there, yonder the theatre, gymnasium, baths... The mole, the Heptastadia, was built from the city out to the island, dividing the sea into two great harbors. Ptolemy Philadelphus kept his warships in the eastern harbor. Commercial shipping used the western harbor.

Alexandria, the greatest city in the world, the Gem of the Nile, the Pearl of the Mediterranean, was indeed Greek. But more than Greek. All races lived here. Egyptians, of course. And Jews, Nubians, Syrians, Persians, Romans, Carthaginians. (Those last two were quite civil to each other here in the city,

though several thousand stadia to the west their countrymen were happily slaughtering each other on Sicily and adjacent seas.)

He was passing now through the northeast sector, along the Street of the Hebrews. The Jews had a specially elegant quarter, a politeumata set aside for them by Alexander him-self, in gratitude for their help in his Persian campaigns.

"Greetings."

He looked up. Was someone calling to him? Yes, there was the rabbi, Elisha ben Shem, coming down the steps of the synagogue. "Greetings, noble Eratosthenes!"

The geometer-librarian bowed graciously. "Peace to the House of Shem! How goes the translation?"

"Oh, very well indeed." The priest stroked his flowing silver beard and chuckled. "Why I laugh, I do not know. It really isn't funny."

Eratosthenes looked doubtful. "Well, then...?"

Ben Shem grinned. "You have to be Jewish to see it, my friend. You and I converse in Greek, the tongue of the Hellenes. I am also fluent in classical Hebrew, in which our Holy Scriptures were written. I can also speak Aramaic and the other local dialects of Judea. But did you know there are forty thousand Jews here in Alexandria who speak, read, and write Greek and only Greek? They can't read a word of the Books of Moses, and the Psalms of David are mysteries to them."

"I knew that," said the man of measures. "That's why Ptolemy brought seventy scholars from Jerusalem here to translate the Hebrew texts into Greek. Seventy. The Septuagint. Actually, seventy-two, wasn't it?"

Ben Shem sighed. "Ah, Eratosthenes my dear boy. So learned. So earnest. But think of it! Jews translating Hebrew into Greek for Jews. Where is the subtle sense of irony, the love of paradox, that set your ancestors apart from peasant minds? If you had your way, Achilles would overtake Zeno's hare with a single pulse beat."

"Rabbi..."

"Oh, never mind." He turned his head a little. "You are still attempting to determine the size and shape of the Earth?"

"Yes, still at it."

"Are you close to a solution?"

"Now, rabbi. You know I must report all findings first to his majesty."

"Yes, of course." He cleared his throat. "You will be at the palace tonight? To celebrate the coming of the Nile flood?" They stopped before the residence of the priest.

"I'll be there," said Eratosthenes.

#### **4. The Stone Cutter**

He crossed the great intersection at the magnificent mauso-lea. Here Alexander was laid to rest, in a marvelous glass-and-gold coffin. And in the tomb adjacent, the first Ptolemy. Beyond, to the west, lay the Rhacotis, originally the haunt of fishermen and pirates. Now, however, eighty years after the Conqueror had paced out the unborn city, it was full of the run-down shops and abodes of artisans, poets (mostly starv-ing), and astrologers, raffish theatres, baths (some clean), slums, and certain facilities for sailors.

And so into the Street of Stone Cutters, and the first shop on the corner. He could hear the strike of chisels well before he entered the work yard. In the center, four slaves stripped to loin cloths chipped

away at a copy of the Cnidus Aphrodite. The assistant project master hovered about the crew anxiously, calling, coaxing, occasionally screaming. They all ignored the newcomer. Eratosthenes shrugged and passed on into the shop. Little bells rang somewhere and the man behind the counter looked up, squinting and coughing. Stone dust had long ago impaired his eyes and lungs. "Ah, Eratosthenes," he muttered, rising. "Greetings, and welcome to my humble shop." He groaned softly as he tried to bow.

"And greetings to you, good Praphicles. I trust the gods are kind?"

"Alas, great geometer, business is terrible. When our present commissions are completed I expect that we shall starve."

The visitor smiled. Business was always terrible and starvation always lay in wait for the old fraud. Even in his semi-blindness Praphicles was still the most highly skilled of stone workers in the quarter. He turned away clients, and he owned half the real estate on the waterfront.

"Well, then," said Eratosthenes dryly, "before the gods utterly abandon you, perhaps we had better conclude our business."

"Ah yes." The ancient master reached down into a cupboard under the counter, pulled out the work, and laid it carefully on the cedar surface.

It was a statuette of the Titan Atlas, bent, with arms arched backwards and up, as though already holding his great burden, Earth. It was cut from the famous red granite of Syene. The base held an inscription in Greek, which Eratosthenes verified by reading slowly to himself.

The old sculptor's eyes never left him.

"It is beautiful," said the visitor. "The years have not dimmed your hands, old friend. Your fingers grow even more skillful, if that is possible." He pulled a purse from his cloak and dropped it to the counter. "The balance."

Praphicles made no move toward the little leather bag. He said, "The commission was interesting, especially in what was *not* commissioned."

"You don't make sense."

"The Earth that Atlas will hold... where is it? Who will supply it?"

"I'll attend to that."

"And what shape will it be? He is positioned to hold a disc, or a cylinder, or a square. Or perhaps even a sphere."

Eratosthenes smiled. "How are the wagers running, good Praphicles?"

"Two to one that you will report to his majesty that the Earth is shaped like a disc. Even odds for a cylinder. Three to one against a square. Ten to one against a sphere." He pushed the bag of staters back to Eratosthenes. "Just give me a hint," he whispered. "And keep your purse."

The geometer chuckled, pushed the money back, and picked up the little statue. "I will pray to the gods to save your business, old friend."

Out again. Still walking west, and getting closer to the Eunostos harbor.

## 5. The Horoscope

He thought of one of the great Periclean speeches, as recalled (and probably polished up a bit) by Thucydides.

"Each single one of our citizens, in all the manifold aspects of life, is able to show himself the rightful lord and owner of his own person, and do this, moreover, with exceptional grace and exceptional

versatility."

Well, Pericles, perhaps that was the way it was with you and your Athenians, but that's not the way with me. When my career—nay, my very skin!—is at risk, I feel neither grace nor versatility. I feel afraid. For I have a fair idea already how my calculations are going to come out. When I make my report, a great many people will be very, very upset. Hor-ent-yotf had warned me not to make any measure-ments whatever involving the sun. "It is heresy," the priest had said. "Not even a Greek under royal protection may break our religious laws with impunity."

So why am I here, in this street, at this hour? I know very well why.

But I mustn't show my anxiety. What would Marcar think? He and I studied together under the Stoic Ariston, in Athens. After that, we went our separate ways. But now here we are again in Alexandria.

Ah, Marcar, thou man of Mesopotamia, part mystic, part mountebank. Which part dominates? No matter. We have always been able to talk together.

And now it was time to be careful. Not against robbers or pickpockets. That wasn't the problem at all. The problem was simply this: he was now in the Street of the Mathematici Chaldaei, and he would just as soon not be recognized. What would the good rabbi say if he saw the highly rational geometer walking into the shop of an astrologer? The holy man would indeed have his cherished laugh!

Eratosthenes pulled his cloak up around his face and began walking in an anonymous shuffle. He was barely halfway down the street when small dirty urchins began tugging at his tunic. "My lord! Beautiful pictures! Naked ladies! All differ-ent positions! Mine are best! Painted directly from Ptolemy's harem. No! Straight from Eratosthenes' secret scrolls at the Library! No pictures! Real live women! No waiting! Cheap! My virgin mother! Only twenty drachmas!"

By Zeus and Hera! He struck out at them, but they scat-tered nimbly, like a flock of water birds.

A strong hand grabbed his sleeve. "In here, you old lecher!"

"Marcar!" He stepped into the antecourt and his host slammed the great door behind them. "Thanks, old fellow. I was coming to see you, anyhow."

"I know." He motioned to the table and chairs.

"You always say that. Actually, you hadn't the faintest idea I would visit you today."

"Maybe not today, exactly. But soon. You say you don't believe in the stars, august Eratosthenes; yet you come here because you are not completely sure. You are curious." He poured two goblets of Persian wine. "So what do you want of me?"

"Nothing. Everything."

The astrologer smiled faintly. "Translating: Does your horo-scope predict anything horrible in your immediate future?"

The geometer gave him a hard look. "Well?"

"But the answer would be meaningless to you, friend, because you do not believe in astrology, or horoscopes, or star-fates."

Eratosthenes sighed. "You're right, you know. I can't have it both ways. I can't denounce horoscopes in one breath and ask for mine in the next. But it's always good to see you, Marcar." He started to rise.

The Chaldean waved him back down. "Not so fast. Tarry a bit. Who requires total belief, old friend? Not I. And what is belief, anyway? A curious mix of tradition, garbled facts, superstition, prejudice—and once in a great while, perhaps a little truth thrown in to thoroughly confuse the picture." He sipped at his cup. "Let us clear the air. I suspected you might come. So this morning I constructed your horoscope."

The Greek looked across the table in surprise, but was silent.

"You might at least ask," said Marcar. "You owe me that much."

The librarian smiled. "I ask."

"Well, then. At the outset, please understand that a horo-scope makes no absolute predictions, at least of the type you are thinking about. No chart will ever say to you, Eratosthenes, you will die at sunup tomorrow. At most your chart will say, Eratosthenes, you will be presented with the *possibility* of dying on such and such a day, and perhaps at such and such an hour."

"Go on," said his visitor quietly.

The Mesopotamian shrugged. "You have given the gods much trouble in recent days, and I think that even now the matter is not fully decided. I see Gaea, the Earth goddess. You would strip her naked. You would say, her size and shape are thus and so. I see Cronos, the god of time. You would have lovely naked Gaea turning, turning, turning under the lascivious scrutiny of Cronos. Apollo stands still in the skies, and leers."

Eratosthenes laughed. "What a marvelous way of saying the Earth rotates and moves around the sun."

"Ah yes. The heliocentric hypothesis. But that's only part of the difficulty. The scientific pros and cons are quite beyond me, my esteemed colleague. All I can say is, that's the problem that brings the risk. May I be blunt?"

"It would be most refreshing."

"The wrong answer to your present geodetic research may well get you assassinated."

"By Ptolemy?"

"I don't read pharaoh... I see a woman... young, beautiful, dedicated."

"So you know about Ne-tiy. Placed in my house by the Horus-priest, Hor-ent-yotf."

"Everyone knows. The female cobra within the flower basket. Why don't you get rid of her?"

"Nonsense. He'd find someone else. Meanwhile, she's where I can keep an eye on her."

Marcar shrugged. "That's up to you, of course. But the risk to your life is not the only matter of significance. There's another thing."

"Oh?"

"You will have a visitor. A most remarkable visitor, from a place far away. I am tempted to say he is a god, but I know how you feel about the gods. Like you, Eratosthenes, he faces a great trouble. But you can help him, and he can help you."

The mathematician chuckled. "Now *that*, friend from the marshes, *is* a prediction. Years away, of course. It's always safe to predict things that happen ten years from now."

Marcar smiled. "According to the signs, he arrives on the first day of the New Year."

"There you go again. *Which* New Year? The New Year when Sirius is first seen in the dawn skies, announcing that the Nile will begin its rise? In fact, tomorrow, in the hour before sunrise? Or do you mean the New Year of the current Egyptian calendar, the first day of Thoth, which is actually two hundred days away? I remind you that the Egyptian calendar is based on 365 days, not 365 and a quarter, as shown by the stars, and that it loses one full year every 1,460 years. The last time the calendar was right was 1,171 years ago. It won't be right again until 289 years from now. So—*which* New Year, most noble charlatan?"

Marcar's eyes gleamed. "Your sign is Cancer. And how-ever you calculate it, O great geometer,

Cancer begins at midnight tonight, and announces the first day of the summer solstice. In the dark morning skies Sirius will indeed be seen, heralding the New Year, and the awakening of Hapi, which you Greeks call the Nile, with great festivities beginning in all towns and villages the entire length of the river, and continuing for twenty-one days, with carousing, merriment, and consumption of seas of barley beer."

Eratosthenes laughed heartily. "I take it, most astute as-trologer, that buried in that Rhea-flood of rhetoric is an assertion that my relevant New Year is within the small hours of tomorrow morning, beginning with Sirius ascendant?"

"Thou seeest all, wise Eratosthenes."

"I see that you are a fraud, more colossal than any pyramid at Gizeh."

"My lord overwhelms me with his flattery." He leaned forward. "Now that your stomach is weak with laughter and your defenses breached, may we talk of your sun-project?"

"It's a bit premature."

"In any case, presumably you have by now determined the shape of the Earth? Perhaps you could tell an old friend?"

"My report goes first to Ptolemy. You know that."

"Of course, of course. Nevertheless, what harm is a hint... in strictest confidence?"

The mapmaker grinned. "I hear the odds are disc, two to one; cylinder, even; three to one against a square; and ten to one against a sphere." He rose to leave. "Later, Marcar. Later. I promise."

"If you live," whispered the astrologer.

The visitor stopped. He turned around slowly. "Have you drawn the horoscope of Hor-ent-yotf?" It was a stab in the dark, a flash—of what? Psychic insight? Stupidity?

Marcar peered at him most strangely. Finally he said, "Why do you ask?"

"Never mind. Really none of my affair." But he knew. The astrologer had lifted the veil on the sinister Egyptian, and he had not understood what he had seen. It was pointless to press the seer further. One thing was certain: the fates of Eratosthenes and Hor-ent-yotf were inextricably interwoven, like designs into a funerary shroud.

He bowed and left.

## **6. The Shadow**

And so home again, away from smells and noises and dirty streets. Eratosthenes nodded to the gatekeeper and walked up the palm-lined entrance toward the central gardens. He paused under the colonnade and looked out toward the focus of the courtyard. There, as he had ordered, the scribe Bes-lek sat cross-legged in front of the shadow cast by the man-high gnomon, and he was chanting. Bes-lek had selected his own chant, a hymn, really, something addressed to Horus the sun god, a recital not too long, not too short. As the Greek watched, the clerk finished his mumbled litany, dipped his reed pen into the little pot of charcoal ink, and made a tiny dot at the tip of the gnomon shadow on the circular stone flagging. Then he commenced again. "Horus, giver of light, son of Osiris and Isis, shine down upon us in thy journey across the sky..." It was in Egyptian, and between the foreignness of the language and the garbled maundering, the sense was largely lost on the librarian.

Eratosthenes walked up the gravel path toward the chanter. Bes looked up and saw him coming, but his droning mumble did not waver. The geometer looked down at the white flag-ging with critical eye. Bes sat just outside a concave curve of dots. He had begun about an hour before noon, and now it was about an hour after noon. The dots showed longer shadows at the beginning, growing shorter as noon approached, then growing longer again as midday was passed. The dot closest to the gnomon base



would be the one for noon. That was the one to measure. "Bes," he said, "my faithful friend, I can see from the marks that you have made a fine record of the god's overhead course. The matter is complete, except for measuring the noon angle. Get up now, stretch your legs, and then help me with the angle rod."

"Aye, thank you master." The little man groaned with great eloquence as he struggled to his feet. "Such strain, such care. My poor joints. I shall ache for days. For the pain, perhaps my lord could allot two extra puncheons of fine barley beer."

"Two?"

"One for my wife. The dear creature assumes all my pains. And considering that the festivities begin tonight."

"Two, then. Tell the steward. But first, hold the angle rod. Put the point on that inner dot, the one closest to the gnomon. Yes, that's it. Steady, while I rest the upper edge on the top of the gnomon. Fine, fine. A good angle. Now, let me take the precise measurement on the protractor arc. Yes. Seven degrees, twelve minutes, I'll take the rod."

"Is it done, master?"

"One more measurement. I need to know the distance of the dot to the base of the gnomon." He placed the rod at the base of the gnomon and alongside the noon dot. "Hm. Check me here, Bes. What number do *you* read?"

The scrivener squinted. "It is one and a quarter units, and yet it is a generous quarter."

"We'll call it one and a quarter." He doesn't ask why, thought Eratosthenes. He doesn't wonder. He doesn't care. Not one hoot of the owl of Athena in Hades. He gets his daily bread, with an occasional extra ration of beer. He has his gods and his feast-days, and he's happy. A true son of the Nile. Well, why not? It seems to work for him. He said, "Tell the guard of the kitchen I said to give you *three* puncheons of good brown khes, suitable for Ptolemy's own table. One for you, one for your wife, and one to lay on the altar of Horus, the hawk-god of the sun, who has favored us today."

Bes bowed low. "The master overwhelms me."

He's not even being sarcastic, thought Eratosthenes. "Go," he said.

And now back to the calculations. The gnomon was ten units high. The leg measurement was one and a quarter. The tangent of the sun angle was therefore one hundred and twenty-five thousandths. What was the angle? It ought to check out pretty close to seven degrees, twelve minutes. He had trigonometric tables in the Library that would give the value. Check. Confirm. Recheck. Pile up the data. It's the only safe way.

Why was he doing this? Who cared whether the earth was a globe? Who cared what size that globe might be? Not Ptol-emy Philadelphus, his lord and master, the pharaoh-god, who had brought him here to run the great Library. In fact, Ptolemy had made veiled references to temple pressures. Hor-ent-yotf, the high priest of Horus, was complaining that these studies were demeaning to the hawk-deity and might even fore-shadow a revival of monotheism, as attempted by Ikhnaton a thousand years ago. *That* misguided pharaoh had proclaimed, "There is but one god, and he is Aton, the sun. Pull down all other temples." The crazed pharaoh had been slain and his name obliterated from all monuments. Over the years the tombs of all his descendants, direct and collateral, had been searched out and desecrated.

All except one, mused the geometer. The boy pharaoh, who married the third daughter of the heretic. The youth had been assassinated, of course, and then properly and secretly buried, along with suitable treasures, in a hillside in the necropolis at Thebes. However, before the Aton-haters could find the grave, the tomb of the fourth Rameses was dug in the cliffside just above, and the boy-king's grave was buried under the quarry chips. Eratosthenes had seen the maps and read the reports, and then he had hidden them away.

And why was he thinking of the tomb of Tut-ankh-amun? Because it was knowledge that might save his life.

He passed on into the building and walked through silent halls into the mathematics room. Here he found the scroll of trig tables and ran his finger down the tangent columns. The angle whose tan is one hundred twenty-five thousandths. Here we are. Seven degrees, seven and one-half minutes. I was looking for seven degrees, twelve minutes. Well, not bad. Within experimental error? And how good are these tables? Some day soon, redo the whole thing. Suppose I take the average. Call it seven degrees, ten minutes, or almost exactly  $1/50$  of a circle. Base line, Syene to Alexandria, 5,000 stadia.

So if the Earth is a sphere, 5,000 stadia is  $1/50$  of its circumference, which is, therefore, 250,000 stadia.

Two hundred and fifty thousand stadia.

That's what the numbers said. But was it really so? Such immensity was inconceivable.

He rubbed his chin in perplexity as he walked over to the big table where his map was spread out. His greatest work. Ptolemy himself had praised it and had accorded the ultimate flattery of reproducing the map in mosaic in the floor of his study. Copyists were turning out duplicates at the rate of one every two weeks, and probably making all sorts of errors in their haste. For which he, the author, would be blamed, of course.

He bent over the sheet.

It had been a magnificent effort, drawn mostly from documents in the library: travelers' reports (especially Herodotus'); terse military accounts; letters; local descriptions; sea captains' logs; census and tax reports. To the west, it showed the Pillars of Hercules; and even beyond that, Cassiterides, the tin-islands discovered by Himilco the Phoenician. To the east, Persia, conquered by Alexander, and on to India and the Ganges River. And beyond *that* a mythic land, Seres, where a fine fabric called silk was woven. Then the legend isles of Cipangu (which he didn't even show). But the whole known world, from west to east, was at most 75,000 stadia—less than one-third of the sphere he had just calculated.

And yet he knew his numbers were right.

There was more to the world than he or anyone else had dreamed.

Was the rest simply water? Vast, barren seas? Or, on that other invisible hemisphere, were there balancing land masses, with peoples and cities and strange gods? His heart began to pound. He knew it was futile to speculate like this, but he couldn't help it. Some day...

## 7. The Light

Khor sniffed the cabin air. Was it going stale? Yes, the  $\text{CO}_2$  was definitely building. Which meant the absorbers were very nearly saturated. Why hadn't the alarm sounded? And then he noticed. The purifier bell *was* ringing. And the proper red light was flashing. Swamped by his other troubles, he just hadn't noticed. Alkali. Did he have any more? No. He remembered shaking out the last flecks of sodium carbonate from the container. He had tossed the empty box into the disposal.

Was there any chance of finding alkali down there on that watery little planet?

Conserve. Conserve. Breathe slowly, slowly. Khor, you luckless zoologist. Whatever possessed Queva to give you her sleep key? Not very smart of her.

Well, now, Planet III, just what sort of world are you? Is there intelligent life down there, waiting to hand me emergency tape, a barrel of oil (meeting hydraulic spec K-109, of course), and a basket of alkali? And (who knows) maybe they'll hand me a featherless biped as I leave.

How silly can I get?

He watched the 3-D shaper carve out a fist-sized copy of the planet sphere: blue for oceans, brown for continents, white for polar ice. He pulled the ball out of the lathe and studied it. Very, very interesting. How big? No way to tell. All he got was shape and surface. No matter. Maybe he was going to live after all. There had to be *something* down there. He put the ball in a fold of his space-jacket.

Back now to the screen.

Looking visually. Night-side. But no city lights? No civili-zation? Take her around again. Another orbit. Try north-south. Nothing? Not yet. Night side again. Maybe I'm too high. Lower... lower still. Watch out! Water! Slow down. I'm over some kind of sea. Hey—a *light*! A big one! It's a light house! Better switch on my running lights... what's the convention? Alternating red... green... white... blue. Plus a forward search beam. By Zaff, I see buildings. Spread out... a *city*. Saved!

Where to put down?

## 8. Arrival

Eratosthenes wrapped his woolen cloak tighter about him as he stared out to sea. It was the last hour of evening and the first of night. Dark sea was indistinguishable from dark sky. The constant north wind pushed back the dubious perfumes of the delta and the royal harbor, to his rear. He inhaled deeply the crisp salt air blowing in from the reefs.

He stood on the balcony of the great light house, on the Isle of Pharos, that long spit of limestone protecting Alexan-dria from the encroaching Great Green. He was so high, and the air so pure, that he didn't even have to use mosquito ointment.

Ah, Pharos—isle of strange and diverse fortunes! Menelaus, bound homeward from the Trojan War, blown ashore and becalmed by angry Zeus, nearly starved here, with disdainful Helen. So Homer sang. How long ago? Eight centuries, perhaps nine. But then eighty-two years ago the great Alexan-der came. "A fine island," he said. "It will shelter a new city, over there on the delta." He paced it out, where to put everything. Everything but the final essential building: his tomb. The first Ptolemy had built that and then had brought the body back.

"Eratosthenes." he said to himself, "you're dodging the issue. You're thinking about everything except the problem." Ah, yes. So he had confirmed (in his own mind at least) that the Earth was a sphere, with a circumference of 250,000 stadia. But it was too much. A globe that size! Incredible. Or was it? There was, of course, a rough check, available to anyone. You didn't have to go to Syene. You didn't have to look down a well at high noon, on the day of the solstice. There was another way. Just an approximation, of course.

He walked a slow circuit of the balcony, pondering vaguely the beauty of the night sea and the twinkling lamps of the city. It was lonely here, and he could think. No one to bother him. The lighthouse keepers knew him as the curator of the great Library, and let him come and go as he pleased. Far below in the courtyard Ne-tiy waited patiently with the chariot.

To the north nothing was visible except the stars and the light shaft thrusting out horizontally from the great concave mirror at the top of the tower. He had come here to think about that light beam. It was supposed to be visible out to sea for 160 stadia. To him, that was one more proof that the Earth was spherical. The light was visible out to sea to the point where the Earth's curvature shut it off. He reviewed the problem in his mind. He saw the diagram again. Circles. Tangents. The height of the Pharos tower, taken with the seaward visibility. That would give an angle—call it alpha—with the horizon. That angle alpha would be identical to the angle—call it beta—at the center of the Earth subtending the 160-stadia chord of the light shaft. The lighthouse was two-thirds of a stadion high. The sine of the angle alpha was therefore two-thirds divided by 160, or 417 hundred thou-sandths. Next, the angle whose sine was 417 hundred thou-sandths was about 14<sup>1</sup>/<sub>3</sub> minutes, or about 1/1500 part of a circle, and finally, 1500 times 160 gave you 240,000 stadia. Close enough to the Syene measurement of 250,000. So he couldn't be

too far wrong. He had done the numerical work already. He knew the result before he came out here tonight. But he still found it hard to believe. The Earth couldn't possibly be that big. Or could it? Had he made an error somewhere? Maybe several errors? Actually, the measurements using the lighthouse were not easy to make. Sighting the Pharos light had to be done at sea from a pitching, bobbing boat. Subtractions had to be made for the height of the perch at the mast top.

He clenched his jaw. He had to believe his numbers. He had to believe his rough check. And he had to believe the only conceivable conclusion that his calculations offered. The Earth was indeed a huge sphere, in circumference 240,000 to 250,000 stadia, more or less.

The question now was, should he so report to Ptolemy, and possibly get himself discharged from his post at the Library. Or worse?

He was due at the palace by midnight. He would have to decide within hours.

He had just turned back, to descend the outer stairway, when something in the dark northern skies caught his eye. Lights, moving, flashing. And different colors. Red... green... white... blue... flashing, on and off. And then that terrific shaft of white light... brighter even than Pharos... *coining straight at him!*

He threw his arm up over his eyes. There was a roar overhead. The tower shook. And then the thing was gone... no, not entirely. There it was, over the Library quarter... hovering now, stabbing its blinding light beam down. He raced around to the side of the light tower.

What in the name of Zeus!

Was it now over *his* house, the great manse entrusted to him by Ptolemy Philadelphus? He stared in horrified amazement.

By the wine bags of Dionysus, the thing was... descend-ing into his fenced park.

For a moment he was paralyzed. And then he recovered and started down the stairs. Outside, he awoke the dozing charioteer. "Ne-tiy! Home! Home!"

## **9. Encounter**

Khor read the preliminary data in the analyzer. Oxygen, nitrogen, air density, viscosity, temperature... Nothing obviously toxic. Gravity a little low. No matter. Everything within acceptable limits. He turned off the lights and got out. Fortunately for the ship (not to mention his unwitting host), he had come down in a clearing. There were trees and hedges on all sides. Tiny little things, but they would provide shelter. He had landed within some sort of private estate, and very likely he could complete his repairs without the bother of curious and/or hostile crowds. And what did they look like? If they built cities, they must have hands, and legs to get about, and certainly they were able to communicate with each other. Probably very handy little fellows.

He walked on the cropped turf back to the rear of the ship. Yes, there was the hole. He played the light on it and around it. The outer plate had laminated over nicely. Only the interior would need attention. Well, get with it. Start knocking on doors. "Could I borrow a few hundred xil of adhesive tape? And a load of high-spec hydraulic fluid (you supply the container). Plus a var of sodium carbonate. Just enough to get me to a star some nine light cycles away."

And that raised another problem. What language did these creatures speak? Better get the telepathic head-band. He crawled back up the hatchway and returned with it. Suppose they're unfriendly? Should I bring a weapon? No, I've got to look absolutely peaceful.

His ear tympani vibrated faintly. Noises. Wheels churning in loose gravel. Cries, addressed, he thought, to a draft animal of some sort. Two different voices? They had seen his ship come down, and they had driven here to confront the trespasser.

Fair enough. He unfolded the long veil, starting at his head, over the teleband, and quickly draped his

entire body from head down to talons. (No use alarming them right at the outset!) Then he propped up his portable beam between rocks in the clearing so that it would shine on him.

He listened to the cautious steps on the fine pebbles, closer, closer.

And there they were, two of them, standing just outside the light circle.

By the pinions of Pinar! Featherless bipeds!

One seemed calm, the other fearful and fidgety. The calm one stepped out into the light.

Excellent! thought the visitor. It has stereoscopic eyes, nostrils, mouth, ears. Not the most attractive alien he had ever encountered; yet not the ugliest, either. Somewhere in between.

Khor held up both hands to show they were empty, then bowed slowly.

The calm one repeated the gesture with great dignity.

Khor spoke through the tele-band into the mind of his host. "My name is Khor."

The Greek showed his surprise. "You understand Greek? And you are able to speak into my mind? How is this? Whence came you?"

Khor pointed to the band around his head, visible in outline under his body veil.

"Ah," said Eratosthenes. "A mental language device. Fantastic. But where—" He jerked. Strange thoughts... strange sounds... sighs... smells... were forming in his head. He gasped. "You are from a distant world? A *star*?"

Khor nodded.

The geometer gulped. "Are you a god? The messenger Hermes perhaps?" (How could he be asking this? He didn't believe in gods!)

"No. I am a mortal, like yourself. My people are a little more scientifically advanced than yours, that's all."

"Why are you here?"

"I was on a collection expedition. I work for a museum, the same as you. I was searching for certain plants... animals... I was loaded up, and on my way home, when a meteorite hit my ship. I had to land for repairs."

"I see. I *think* I see. Can I help you?"

"I don't know. I will need certain things. Certain... tapes. Certain oils. Some... alkali. And then perhaps some geodetic information."

"Such as?"

"The circumference of your world, Terra, considered as a sphere."

The Greek eyed his visitor sharply.

Khor hesitated. "Have I asked a forbidden question? Is something, how do you say it, taboo? Or perhaps you were not aware that Terra is a sphere?"

"*That* I had indeed surmised. No, I was simply struck by the coincidence. I have been working on the problem for the past several weeks, and very recently, actually within the last few hours, I have obtained some sort of answer. But why do you need to know?"

"I can use Terra's rotational velocity to help fling the ship into escape orbit, when the time comes to leave. To determine that velocity, I need to know Terra's circumference."

"I think I can provide a fair estimate."

"Excellent."

Eratosthenes had to stop and think a moment. Khor needed the velocity of the *rotating* Earth? Well, of course. The Earth rotated. That's why the sun *appeared* to move around the Earth. But that wasn't all. The Earth must revolve around the sun, from a very great distance, once a year. And that's why the sun appeared to move through the zodiac once a year. Actually, it was the Earth that was moving. The sun stood still. The heliocentric hypothesis wasn't a hypothesis. It was a fact. And if the Earth moved around the sun, so did all the five other planets: Mercury, Venus, Mars, Jupiter, Saturn. And so the sun was a star, much like millions of other stars. Did all those other stars out there have planets, with strange life forms, thinking, working, loving? His heart beat faster as he thought about it. Whom could he tell? Nobody. "A visitor from another star told me." Next stop, the madhouse. It made him smile just to think about it.

But back to reality, and the present. "So then, Khor, can I offer you the hospitality of my house? Not a Ptolemaic palace— but yet not a hovel, either. Food of all sorts, wines brought in from all parts of the world. Baths, hot and cold. Servants to assist you. You could relax while we dine, and you could describe your needs to me."

"Your offer is most attractive. Truly, I have a great need. But I do not wish to cause problems for you. I read in your mind certain names: Ptolemy... Hor-ent-yotf... even the female at your side, Ne-tiy. Who are these people? How can they harm you?"

"Harm me? Perhaps the words are too strong. Ptolemy rules—*owns*—this land, called Egypt. He is a Greek, a for-eigner, and he tries to rule softly, and to give no great offense to the people, aside from taking their money. But Hor-ent-yotf, a high priest of the hawk-god Horus, likewise rules, in that he reigns over the minds and souls of the people. Ne-tiy is a slave, put in my house by Hor-ent-yotf. She is his property, even as his clothing and his cosmetic box are his property. Do you read my thoughts in this matter, honored stranger?"

"I do, and I reply with thoughts. You propose to do a thing offensive to Ptolemy, and horrifying to Hor-ent-yotf, and because of this thing the priest may kill you. Or perhaps make the female kill you. Is this the situation?"

"It is so."

"I find this quite alarming. Obviously, I do not understand your ways. Please explain."

"It is a very complex matter, O visitor from great dis-tances. Perhaps we can continue over cakes and wine?"

"Fourteen percent  $\text{CH}_3\text{CH}_2\text{OH}$ ?"

"I beg your pardon?"

"Just thinking out loud. A pleasure, Eratosthenes. Just let me close up the bucket."

## 10. Repairs

"To each his own custom," thought Eratosthenes. "We Greeks eat while reclining on an eating couch. The Egyptians sit in chairs. But you stand."

"At all times," replied the thoughts of his visitor. "We stand to eat, drink, study, work, even to sleep. Our skeletal structure requires it." His gloved hand clasped the wine cup and brought it to his lips through a slit in his body veil.

The Greek heard a "clack" as the metal goblet struck something hard. "Well then, let us look to your needs. First, strips of adhesive cloth. Tapes, you call them. That we have in abundance. It is the custom of the country to use them as bandages to wrap the bodies of the dead, in preparation for burial." He held up a piece of white cloth. "This is a rather fine linen, woven from the flax plant. Every Egyptian family

saves scraps of cloth against the inevitable burials. The pieces are ripped into strips: narrow bandages for the fingers, wider ones for the limbs and torso." He tore off a strip and handed it to Khor, who examined it closely.

"What makes it stick?" asked his visitor.

"They dip it in liquid balsam. It sets up hard in a couple of hours."

"It ought to work," said Khor. "Now, about the oil."

"We have several kinds: olive oil, from the fruits of the olive tree. It's used in cooking and in our lamps. Castor oil... several grades. This is from the castor bean. It has medicinal uses, and is also a fine lubricant. The army uses it in the oil packing for its chariot wheels. And linseed oil... which we boil and then use in paints and varnishes."

"Back up. This castor oil... is there a refined grade?"

"Indeed yes. Settled over charcoal and filtered through fine linen."

"I'd like to try that. And now one more thing. A bit of alkali."

"Alkali...?" The geometer frowned.

"Sodium carbonate would do nicely. Hm. That's making it worse, isn't it? How to describe it... let me think. It would be bitter to the taste, very soluble in water, turns red wine blue. Fizzes in vinegar. Can be boiled with fats and oils to make soap..."

"Oh! Of course! *Natron*! We use it in embalming. It helps desiccate the corpse. But how would you use natron in your ship?"

"Simple. During wake-periods on my ship, my lungs give off a waste gas, which we call carbon dioxide. It can become toxic if allowed to reach high concentrations. The alkali absorbs it."

"Well then, I think the next step is to gather up these things and take them out to your ship. I'll call the servants. No—I can't. They're all down in the city, celebrating the New Year. You and I and Ne-tiy will have to do it."

"It's just as well. Less risk to the ship."

To the extent that any of the geometer's aplomb had left him, very nearly all of it had by now returned. He said, "As you may have read in my mind, it is the practice for one of our Library clerks to go through every incoming ship to look for new books to copy. I wonder..."

"Ah, my friend. I have dozens of books, none in any Earth-language. *The Maintenance of Ion Drives... Collect-ing on Airless Worlds... Operation of the Sleep Casket*. Some with holos, for which you'd need a laser reader. But I

tell you what. You like maps. Before I finally leave, I'll give you a sort of map."

"Fair enough."

An hour later Khor, Eratosthenes, and Ne-tiy had wound the last of the linen strips around the hydraulic tubes, refilled the depleted oil surge tank, and secured the amphora of natron in the storage locker.

"The balsam resin will require a couple of hours to cure and harden," said Eratosthenes. "And I am due at Ptolemy's palace very soon. May I suggest that you join me?"

"Won't I excite comment?"

"Hm. You're a bit taller than average. However, just keep covered with your body cape. I'll tell Ptolemy you're a foreign visitor and your religion requires the covering."

"Is it an offense to you, my host, that I conceal my body from you in this way?"

The Cyrenian smiled. "Since you are my guest, it pleases me that you do as you see fit." He bowed. "This way to the chariot."

### **11. Ptolemy on His Balcony**

On this night of the summer solstice, the beginning of the three weeks of madness celebrating the rising of the river. Ptolemy the Second, called Philadelphus, stood on his balcony and looked out over the royal harbor. Shading his eyes, he could barely make out the tiny light swinging in slow arcs in the blackness. At his request, the captain had fixed the lantern at the top of the mast of the royal barge. Why? No reason given. He had simply said, do it, and it was done. Actually, it was a token of a promise to himself: tomorrow he would be on that ship, headed south on the Nile, with all concerns of state receding sternward.

For five thousand years the rulers of Egypt had made this trip. Tradition held that when the sun ceased his northward journey, pharaoh would set forth, sailing all the way to Thebes, to ensure a proper flood. If pharaoh did not thus set forth on the bosom of Hapi, the river would not rise. If the river did not rise, there would be no sowing, and no harvest. Famine would grip the land. The tax gatherers would gather little or nothing. The army could not be paid. The dynasty could fall.

Superstitious nonsense?

Who was he to say?

It was best to go along with it. Anyhow, he always looked forward to the long trip on the river. He just wished Arsinoe were still alive.

Noises in the streets below brought his eyes down to the parade of dancing torches. The annual infection had spread even here, to the guarded serenity of the royal quarter. In a way it was unsettling; yet on the whole it was reassuring that the people were content to stay within their multi-millennial rut. No riots, no revolutions, no marches against the granaries. Not this week, anyhow. Let the beer flow!

He looked around as a woman in an elegant linen dress and cape parted the hangings and stepped out to join him. A thick black wig, artfully dusted with gold powder, fell to her shoulders. She was his concubine of the month. Her name was Pauni, daughter of a noble house. He named them for the current Egyptian month. It was the only way he could attach names to their beautiful faces. And so it had been, since the death of Arsinoe, his true sister-wife, twenty years ago. By Greek ideas, that marriage had been incest; but it was quite in the pharaonic tradition. A bit of irony: in the river tongue, the word for concubine was "sne-t," which meant "sister."

(Ah, Arsinoe, Arsinoe. I loved you greatly. You should not have died. It was the only unkind thing you ever did.)

"Respect their traditions. Respect their religion. Worship their gods," his great father Ptolemy, Alexander's general, had told him. "Be pious. You lose nothing, and you will preserve the dynasty." He took the woman by the arm and they listened in silence to the revelry. "The old man was right," he muttered.

"Who, my lord?" said Pauni politely.

"My father. When the Persians conquered Egypt, they flouted the local religions. Ochus, the satrap, killed the sacred bull. The priests invoked a terrible curse on him, and on his masters in Persepolis. And so Alexander came, and destroyed Persia. He came to Egypt, and gave all honor to the priests. He sacrificed to Apis and other native gods. He made the great journey across the desert, without road or path, to the sanctuary of Ammon at Siwah. There the priests declared his divine descent, and that he was indeed the son of Ammon." He reflected. "Did I ever tell you about Alexander's trip across the desert to Siwah?"



(Several times, my lord.) "No, sire, I don't recall that you did."

"Ah. Well, then. The storms had destroyed the roads. Even the guides were lost. The sun was pitiless, and the men were dropping from heat stroke. But the gods sent a great flock of ravens, who flew in circles overhead, and shaded Alexander. And if the guides made a wrong turn, the birds screamed until they went straight again."

"Amazing," said Pauni.

The royal Greek sighed again. If only he didn't owe so much money to so many people. The Jews had helped him—and his father—finance the great light tower on Pharos. It had been finished these nine years, and the treasury was still paying. And the Egyptian priests. The public debt was soaring because of their demands for new temples. And then there was the standing army, all mercenaries, and they liked to be paid regularly, in hard clanking brass. And the navy. A thousand years ago Rameses had not been troubled with ships that sailed the Great Green. And *two* thousand years ago the pharaohs didn't even use money. There wasn't any. It hadn't been invented yet. Go, said Khufu to his peasants. Build me a tomb-pyramid. One million men, working twenty years. And they had done it, and not an obol paid out to anyone. Alas, how things had changed. "Who rules Egypt?" he mused softly. "Do I? No. Do the one million Greeks who have settled here? No. Well, then, do the priests and their seven million fellahin? Or is the land a hopeless anarchy?"

By now she was used to this. "Speaking of priests," Pauni reminded him gently, "the high priest of Horus is here. Also Rabbi Ben Shem. And then the other notables: Eratosthenes and his lady. The geometer brings a very strange guest, who covers his body with a long black veil. And then there are the consuls and ambassadors—Claudius Pulcher the Roman, Hamilcar Barca, the Carthaginian..."

Ptolemy suppressed a groan. Eratosthenes. He had tried to forget him, but of course it was impossible. The man of measures was going to make his report tonight. And what will you say, noble philosopher? How big is the world? As to that, say anything you like. But the *shape*! Declare Earth a flat square, or a disc, or a cylinder. Any of these. But you know you must not say "sphere" or "ball" or "globe." That's heresy, mathematician. Don't betray me, my brother Greek.

There is a long line waiting to take your place as curator of the great Library. And it isn't just me you should worry about. If you say "sphere," the local holies will have you floating in the canal before the night is out.

He paused. The girl looked up at him in grave concern. He thought: she knows I am fifty-nine, and that I am dying. Ah, to be young again. No, don't turn back. Let it be finally done. Nothing really matters very much anymore. From here on in, let us have peace. He smiled. "Perhaps we should rejoin our guests."

## 12. Heresy

A little cluster had already formed around the two ambassadors. The Carthaginian was explaining something: "One of my purposes here is to obtain copies of the world map of Eratosthenes."

"And what good is that?" growled Claudius Pulcher, the Roman.

"Carthage will probably win our present war with Rome, noble ambassador. If so, we will expand into Spain and Gaul. For that we will need good maps. If we lose—may Baal save us!—we will certainly need to recoup our fortunes, and we would look to western Europe for that. Again we would need good maps. Including—" (here he gave the stolid Pulcher a crafty leer) "a good showing of the passes through the Alps."

"Passes...?"

"For our war elephants."

The Roman genera! stared at him blankly. Then recognition dawned. "Oh—you mean from Gaul, over the mountains into Italy." He began to laugh. He laughed so hard he spilled his wine. "Excuse me." He walked back to the credentia for a refill.

Ptolemy watched him for a moment, then turned back to the Carthaginian. "The great Alexander was always fearful of war elephants. He never really discovered how to cope with them. Quite an idea, Hamilcar Barca."

"But there's still a problem," said Eratosthenes. "We have several reports by travelers in the Library. They all say the passes are very narrow, barely wide enough for a horse. How will you get your elephants through?"

"You should read more of your own books, learned scroll-master," said Barca. "The mountains are made of calx.

Vinegar dissolves calx. We shall bring hundreds of casks of vinegar. The mountains shall melt away, and the great war beasts shall pass."

"Why does Carthage disclose its strategy to Rome in ad-vance?" asked Ptolemy.

The young Carthaginian grinned. "No harm in it at all. First, they think we lie, that we try to deceive them. There-fore, they won't bother to defend the passes. Second, they're so confident that if and when they do fortify the passes they would so tell us. Third, they are incapable of thinking in terms of empire for themselves, so they can't conceive that their enemies would have such impossible ideas. They lack imagination. They don't know what dreams are."

"They seem to have done very well despite these deficien-cies," demurred Eratosthenes. "Three hundred years ago they were just a fishing village on the Tiber. Now they rule the entire Italic peninsula. Who needs dreams?"

"You have a point, mapmaker. Well then, reverse the case. We Phoenicians needed dreams, and we produced them. We have established trading outposts at the limits of the known world. We have sailed through the Pillars of Hercules to the Tin Islands. We have circumnavigated Africa. We have traded in the Black Sea. Our ships rule the Western Mediter-ranean, and business on great waters has made us rich. And all because we had a vision. We still have it, and with it, we shall beat the Romans."

"Peace, gentlemen," said Ptolemy. Wars and rumors of war made him uneasy. "Let us talk of other things. Eratos-thenes, how go the angles?"

"Today, my lord Ptolemy, the day of the summer solstice, I measured the angle of the sun at high noon. I found it to be seven degrees and ten minutes."

The Second Ptolemy smiled graciously, yet warily, and with a warning in his eyes. "And pray what is the signifi-cance of seven degrees and—what was it—?"

"Ten minutes, my lord. Significance?" The geometer eyed the Greek pharaoh carefully. "To determine the significance, we may need the assistance of the priests"—he bowed gravely to Hor-ent-yotf and Rabbi Ben Shem—"and the historians"—a bow to Cleon, the Homeric exegesist—"and perhaps to other philosophers, living and dead."

Claudius Pulcher had meanwhile returned from the credentia with a wine refill. "Aside from all this assistance, real or threatened," he grumped, "can anyone tell me the signifi-cance of seven degrees and ten minutes?"

"By itself, nothing," volunteered Hamilcar Barca. "How-ever, taken with certain other measurements, it could give you the size and shape of the Earth." He said to the librarian: "Am I right?"

Eratosthenes sighed, and glanced at Ptolemy from the cor-ner of his eye.

"Oh, go ahead," said the pharaoh wearily. (And oh, to be on that barge!)

The Greek shrugged. "At Syene, where the finest red granite is quarried, a tall pole casts no shadow at noon on the day of the summer solstice, and the sun shines directly into the wells. This is so because Syene lies almost directly on the Tropic of Cancer. Also, Alexandria lies almost due north of Syene, at a distance of 5,000 stadia. Now seven degrees and ten minutes is about 1/50 of a full circle, so 5,000 is 1/50 of a full circle on the Earth. Thus we multiply 5,000 by 50, and we get 250,000 stadia as the circumference of the Earth."

"One moment," interposed Ptolemy. "You say 5,000 sta-dia. How did you measure that?"

"From cadasters—registers of land surveys for tax purposes, made by the Second Rameses, over a thousand years ago. The exact dimensions of the nomes are given. It's a matter of simple addition, from Syene to the sea, with certain adjustments."

The Roman frowned. "I still don't see. What's a 'stadia,' anyhow?"

Hamilcar Barca smiled. "The singular is stadion. A bit over eight stadia to your Roman mile. Using your units, General, the world is a sphere about 30,000 miles in circumference."

"Ridiculous," breathed Pulcher. "It can't possibly be that big."

"This is entirely unofficial," interposed Ptolemy hastily. "The Great House takes no position..."

Rabbi Ben Shem smiled uneasily. "Dear Eratosthenes... the Earth cannot be a sphere. Our Holy Scriptures state, 'the four corners of the Earth.'"

"I think we may be overlooking the obvious," said Hor-ent-yotf. "Our esteemed geometer assumes the sun is so far away that its rays, as received here, are parallel. The assumption is totally unwarranted, as I shall show. There are other, much more reasonable conditions that will give the same data." He pulled a piece of papyrus from his linens and inspected it. "If the sun is 40,000 stadia distant, it will give your same shadow angle of about seven degrees here at Alexandria, will it not, Eratosthenes?"

The mathematician smiled. "Quite so—assuming the Earth is flat."

"As is indeed the case," said the Roman ambassador.

Hamilcar Barca shook his head. "Like the Greeks, we Carthaginians are a seafaring people. On shore, when we watch a ship come in, we see first the tip of the mast, then the sails, then the bow. That means to us that the Earth is a great ball, and that the ship comes up into view over the curvature. It is the same at sea. For example, my trireme arrived here at night. We came in, guided by the great Pharos light tower. At first, our man at mast-top could not see the light at all. And then, suddenly, 'Light ho!' and there it was, just over the belly of the sea."

There was a moment's silence, broken by Ptolemy. His voice was strained. "This is a very interesting discussion; yet I do not feel that we can ignore a thousand years of research and thought that have gone into the problem. Certainly the ancient authorities leave no doubt on the question. Homer said the Earth was a flat disc, bounded by the River Oceanus. A decade before the battle of Marathon, Hecataeus announced the same fact."

"One moment, your majesty," said Hamilcar Barca. "Your own Aristotle believed the Earth to be a sphere because of the round shadow on the moon, during lunar eclipse."

Ptolemy shrugged. "Homer's disc, head-on, would cast a round shadow."

"My lords," said Rabbi Ben Shem harshly, "I make no attempt to define or deal with impiety. Certainly Greek history provides ample precedent. I have read widely in your Library, Eratosthenes, and I can cite your own laws and applicable cases. Your Anaxagorus propounded a heliocentric system, and wrote that the sun was a big blazing ball, bigger even than the Peloponnesus. He was condemned to

prison for his impiety. Pericles was barely able to save his life. Aristarchus also proposed a heliocentric cosmos, and was accused of impiety. Alcibiades was recalled from the Syracuse campaign to face charges of impiety to Hermes: whereupon Athens lost the war. Socrates was executed for impiety. Protagoras confessed agnosticism and fled Athens with a price on his head."

Ptolemy rubbed his chin. "I, for one, believe Homer, who declared the Earth to be flat, with its omphalos—navel—at Delphi. A sphere seems quite impossible. People at the anti-podes would walk with their heads hanging down. Trees would grow downward. Rain would fall up. These things cannot be." He fixed a grim eye on Eratosthenes. "The gods gave us a flat world, my young friend. Adjust your numbers to fit the facts, not the other way around." And so having delivered his views, and having thus dried his throat, he and Pauni left the group in search of the wine table.

"Well, then, man of the Library," said Ben Shem, with just a hint of triumph, "you will of course recant?"

Eratosthenes found his body turning, not to face the rabbi, but instead to Hor-ent-yotf. It was to the priest of the hawk-god that he gave his answer: "No! I do not recant. I do not retract. It is as I said." The hawk-priest stared at him without the slightest expression.

"Oh!" said Ben Shem. "You claim the Earth is a sphere?"

"Yes."

"And it circles the sun?"

"Did I say that? If I didn't, I meant to."

"Aiee!" shrieked the rabbi. "Heresy, heresy compounded!" He pulled at his beard, and a few hairs tore loose.

"Sorry," said the Greek apologetically. "I didn't know you'd take it this way."

The priest stumbled away, muttering.

Khor shot a thought into the geometer's mind: "Science is a very upsetting subject around here."

"Yes."

Hamilcar Barca broke in. "May I ask a question about your 5,000-stadia measure to Syene?"

"Of course."

"Does that include a rake-off by your local priests? Say, one-sixth?"

"How do you mean?"

"Well, suppose the true measurement is actually 4,285 stadia. Do the priests add one-sixth, or 715, for their share of the grain crops?"

"Yes." It was Hor-ent-yotf who answered. They all looked around at him. "From the time of Menes," said the priest, "the first pharaoh, who united upper and lower Egypt, the temples have taken one-sixth of the crops. We do this pain-lessly, by telling the farmer his plot is one-sixth larger than it really is."

Eratosthenes was embarrassed. "I am caught in a gross error. The circumference is then 4,285 times 50, not 5,000 times 50. More accurately, the circumference is"—he thought a moment—"214,250 stadia, or about 26,000 Roman miles."

"The one-sixth difference is not significant," said Hor-ent-yotf. "The crux of the matter is, you have attempted to heresy of the gravest order." He signaled to Ne-tiy. She glanced once at Eratosthenes, then followed the hawk-priest away from the group.

"Watch him," warned Khor. "I see into his mind. He has condemned you, and he means to kill you."

The geodesist shrugged. "It had to come."

"Shouldn't you leave now?"

"Why delay the confrontation? It might as well be here. Regardless of what happens to me, Ne-tiy can drive you back to your ship."

"I wasn't thinking of that. When the time comes, I can manage by myself."

"Can you see them?" asked Eratosthenes. "You are taller."

### **13. Something in the Wine**

"I see them both very well. He and the female approach the wine table. He whispers to her. She is to put something in your wine."

"Poison."

"Yes. You are to die by poison. The mind of the female is in a great turmoil. She wants to refuse. But the priest threat-ens her. Ah, she looks back this way. but she cannot see you. What a strange expression on her face, Eratosthenes. How is one to interpret it?"

"Horror, possibly. She does not really want to kill me. She resists strongly, but I think probably she will make the at-tempt. From childhood, this is what the temple trained her to do."

"They argue some more. He insists. He says to her, if she fails, servants will bind her mouth and limbs, and carry her in a cart to the temple pool, and the crocodiles will feed. And you will die in any case."

"Pleasant fellow."

"Perhaps you should leave with me, Eratosthenes. As you know, I still seek a bipedal specimen. On my world you need have no fear of assassination."

The librarian laughed forlornly. "Don't tempt me, admira-ble visitor. What are they doing now?"

"Nothing as yet. I am in the mind of the priest. He is thinking about rings on his fingers, and three white powders. Arsenic... strychnine... aconite. Arsenic is tasteless, but takes a while, probably too long for what he wants. Also you might get sick and vomit. Strychnine? A good one. Not much is needed. Acts in a few minutes. Whole body goes into mortal spasm. He's seen a man die, lying flat, resting only on his heels and the back of his skull. But strychnine is bitter. You might taste it and not drink the wine. No, no strychnine for you. It's aconite. The deadliest known poison. It is ex-tracted from a delicate plant that looks like a tiny helmet or hood, and which grows in mountains called the Alps, far to the north of the Roman domains. A crystal the size of a grain of sand can be fatal. You are quickly paralyzed. Your heart stops. Death is quick. Ah, he's moving. He cups his hand over a wine goblet. The cap on his golden ring opens. A powder falls into the wine. He gives the goblet to the girl. He snarls at her, and she moves away. Look sharp, Eratosthenes! Here she comes!"

And there was Ne-tiy, standing before him quietly. "I have brought wine, my lord."

He looked at her in glum silence.

She raised the cup to her own lips.

"No!" he cried. He struck the cup away. It clattered to the floor, splashing red liquid over carpet and guests, who stared around in dismay. "Sorry!" cried the geometer. "So clumsy of me!" He called a serving man to bring mop and bucket.

Ne-tiy had not moved. "True, my lord, I could not harm you. Yet, what you have done to me just now is a cruel thing. For now I face a very painful death. The wine would have been... like going to sleep."

"Khor, take care of her for a moment." His voice grated harshly in his own ears. "Take her out on the

balcony. I'll join you there in a little while." *Now, Hor-ent-yotf, you son of river scum, where are you?*

#### 14. The Bargain

He found him quickly. If Hor-ent-yotf was surprised, he didn't show it.

Eratosthenes controlled his voice carefully, as though he were discussing the weather, the cost of grain, or whether the eastern harbor might need dredging this year. "I understand that Ne-tiy has refused to kill me. This despite your direct order. So that now her own life is forfeit. Is this not so?"

"Why should I stand here, talking to a Greek spawn of Set? Yet it is so. She failed. She dies."

"Let us bargain, high avenger of Horus." Should he include his own life in the negotiations? No. Too demeaning. Just Ne-tiy. He said, "I will buy her."

"Ah?" The small eyes peered suspiciously at the heretic. "With what?"

"Information. I know the burial site of the boy-pharaoh, Tut-ankh-amun."

The eyes of the priest popped. "You lie! You lie most vilely!"

Eratosthenes smiled. "No. It is so. Tut, son-in-law of that great heretic, Ikhnaton, who decreed the worship of Aton, the sun, and desecrated all other temples. Ikhnaton, who built Akhetaton, an entire city, devoted to the worship of Aton..."

"The City of the Criminal!" breathed the priest. "He died. And we destroyed his city. We destroyed everything of his. All—"

"Except the tomb of Tut... who married Ikhnaton's third daughter."

"Prove it!" hissed Hor-ent-yotf. "Prove you *really* know!"

"I have seen the records. The report, for example."

"Report? What report?"

"The one written by the captain of pharaoh's guards. He caught the grave robbers in the act of breaking in. He slew them on the spot, reinforced the entrance, and posted a guard."

"Goon."

"I can give you the record of the final funerary banquet, held within the tomb itself. Eight necropolis officials ate five ducks, two plovers, a haunch of mutton. They drank beer and wine, and they swept up all residue with two small brooms, put the debris in a special jar, and buried the jar in a pit outside the tomb. I have seen the jar."

The Avenger of Horus studied the librarian, and his eyes narrowed in a crafty squint. "How much can you tell me about the location?"

"It's in the Necropolis of Thebes, in the Valley of Kings."

"Hm. That's a big place. Specifically—?"

"No specifics as to place until we have an agreement."

"I see. His queen, the vile spawn of the criminal pharaoh Ikhnaton?"

"Her name was Ankhesenamun. But she was not buried with the boy king."

"Interesting." The priest hesitated. "But certainly the tomb was re-entered subsequently?"

"No. The entrance was later further sealed, one might say almost by accident. I have verified that the seal is undisturbed."

"The last of the Atonist hell-people," muttered the priest. "Pull him out of his death-lair. Burn the

infidel mummy. The gold and silver go to the servants of Horus."

"Is it a bargain?"

The holy man hesitated. They both waited for a time in silence.

Eratosthenes sighed. "The excavation will be expensive. A hundred slaves must be rented and housed and fed for several weeks. You will need ready money. I will sign over my Cyrenian estates to you, together with my gold on deposit in local banks."

Hor-ent-yotf still seemed lost in thought.

"If we cannot agree," said the librarian gravely, "I will be forced to take a certain action."

"Oh, really?" The priest's mouth curled. "Exactly what?"

"I will turn over Tut's location to the Council of Antiquities. They will excavate at government expense. There will be great excitement, presaging a revival of Atonism."

The priest clenched his fists. "You wouldn't!"

"I would."

"Yes, Greek, I think you would... for you are the ultimate obscene evil..."

"Well?"

"But hear me well, son of darkness. We speak only of the faithless slave girl. What Horus intends to be *your* fate, only the god can say."

"Such is my understanding."

"Then consider it done." The priest struck his chest with his fist. "I will have the temple clerks draw up the agreement, in hieroglyphics and in Greek, and I will come with it to the Serapeum tomorrow afternoon. We will sign before witnesses."

"Yes." Eratosthenes turned back toward the balcony. The priest hesitated for a moment, then followed at a dozen paces. He swirled his cloak about him as though to minimize contamination from the air the Greek passed through.

## 15. Sirius Rising

As he stood on the balcony with the girl, Khor found himself thinking of Queva, and Ne-tiy, and how they seemed to blend into one person, one passionate loving mind. "I will wait for you," Queva had said.

He had followed closely the negotiations between Eratosthenes and Hor-ent-yotf. Ne-tiy had saved the Greek's life at apparent cost of her own, and now the man had given up all that he had to save her. Khor would not have believed these creatures capable of such nobility. But there it was. Strong stuff. How was he going to enter this in the ship's log? The Supervisor would neither believe nor understand. So skip it **all**. Maybe tell Queva someday.

I'm very nearly done here, thought the star-traveler. Just one more little job. Ah, come on out on the balcony, Eratosthenes. And here comes Hor-ent-yotf, right behind you. That's good, very good. He shot a thought to the Greek: "Dawn is coming, friend. Look, there's my home star—rising just over the sea!"

"Sirius?" said Eratosthenes, pointing.

"Sothis!" said Hor-ent-yotf, giving the Egyptian name for the great blue star.

Khor spoke again to the mind of Eratosthenes: "Your Sirius—my home star. And a fine conclusion to a profitable visit. You see the first heliacal rising of Sirius, or Sothis, and you tell me that means the Nile has now started to rise. It means the summer solstice, and great festivities throughout the land, going on for days. Thank you for all your help in repairing my ship, and for your contributions, including this last."

"Our pleasure, esteemed visitor!" Then he stopped. "This... last?"

"Especially this last," replied Khor cryptically. "It is time for me to go. If I launch within the next few minutes, my trajectory vectors out directly toward Sirius."

"I'll call Ne-tiy, and she'll run you over to your ship." He was still puzzled.

"No need. I know where it is."

"But how—?"

"Ah, my friend, I see you really didn't know. Well then, in view of what is about to happen, perhaps you should have some important witnesses. Get Ptolemy and one or two others. Quickly now."

Eratosthenes felt a lump of cold lead forming in his stomach.

"Hurry!" said Khor. Through the black body veil the command burst like the hiss of the great gyrfalcon.

Gods! thought the Greek. That was an actual shouted command! He's vocalizing! The librarian sliced through the balcony drapes and stumbled into Claudius Pulcher, arm in arm with Ptolemy. "My lords," he gasped, "could you please join me on the balcony?"

"What's up, Eratosthenes?" demanded the Greek pharaoh. "Oh, I know—Sirius is now visible? Is that it?"

"Majesty, if you please..." Eratosthenes pulled the drapes aside.

A little crowd was already gathering: Pauni... Hamilcar Barca... a dozen gilded dignitaries.

The tall shrouded figure faced them all, then bowed especially to Ptolemy. "Thank you for a pleasant evening, ruler of Egypt," he said in harsh sibilant tones. He took his shroud with both hands and in a smooth majestic motion pulled it away from his head and body, then let it fall to the floor.

They stared.

The great head was entirely feathered. The mouth was an amber beak. Feathers scintillated on arms and chest. Some sort of breech-clout covered the groin. The legs terminated in scales and in what were almost human feet, except that the toes were taloned. As in the raptor birds of the Nile, a horizontal fold over each eye gave the face a stern, even fierce expression.

Eratosthenes now realized that the outlander was a consummate actor, that every word, every gesture, was planned for its dramatic effect, and that this terrified audience lay in the hands of Khor.

The mystery-creature now made his feathers vibrate, so that they excited nearby nitrogen atoms, and surrounded his plumaged body in a golden triboluminescent glow.

Ptolemy dropped his wine cup. Even Eratosthenes, who had suspected something like this would happen, was stunned.

"Horus!" gasped Hor-ent-yotf. "*Thou art the god!*"

"Thou sayest, worthy Hor-ent-yotf," hissed the visitor.

"To your knees, everyone," roared the priest.

And so they did. With one exception. Rabbi Ben Shem tore his cloak and ran screaming from the room.

Khor looked full at Hor-ent-yotf. "Come."

Hor-ent-yotf rose and walked forward, as though tranced. Khor took the man in his arms. "Arise, all, and witness," he commanded.



Gigantic wings unfolded from Khor's shoulders. The spread of those great pinions exceeded even the breadth of the balcony.

And now even Eratosthenes was done in. He pronounced slowly, quietly, and with great conviction, his favorite school-boy oath. "Holy... excrement... of Zeus!"

Khor ignored him. "Since I take with me this holy man, I must appoint and sanctify a person to take his place, and to rule my holy temples in his stead. I name Ne-tiy. Come forward, child!"

They made way for the slave-girl. She bowed before the winged thing.

"I name thee High Priestess for Horus, for Egypt, and for all the world, exalted above all men, above even my noble son, the pharaoh Ptolemy. Take thee to mate whom thou wilt. Be fruitful, and be merry. I go."

He held the priest with one hand and tossed something to Eratosthenes with the other.

Next, there was a tremendous rush of air from the fantastic wings, and the giant birdman leaped over the balustrade and was gone.

Eratosthenes watched for a moment. At least the coursing creature was headed in the right direction.

Should he feel sorry for Hor-ent-yotf? He decided that maybe he should. However, he didn't. A character flaw, possibly. But who was perfect?

The rest of them joined him at the parapet. All eyes were looking out over the city, searching the skies. And now a collective gasp. "There!" cried someone. "The chariot!" shouted another. "See the lights!"

"Straight into the rising sun!"

He turned away and hefted the strange ball Khor had thrown to him. No time now to study it in detail, but he knew intuitively what it was: a model of the Earth.

He raised his eyes. Ne-tiy was standing at the entrance-way, looking at him. The geometer walked toward her. "How it is on *his* world, I do not know. But in Greek lands, the man takes the woman, though she be exalted, and of the highest rank. And so I take thee, Ne-tiy."

She gave him a sweeping bow and a most marvelous smile.

## **16. The River**

"I hope the Horus affair has taught you a lesson," said Ptolemy. "I think you must now be quite convinced."

The two couples rested under the rear canopy of the royal yacht, which was moving upriver with its great red sail stretched tightly by the north wind. Pauni and Ne-tiy were immersed in private murmurs while the men talked intermit-tently.

"I have learned much," admitted Eratosthenes.

"For myself," continued the Greek pharaoh, "I never had any doubt that the gods were real. It is a bit puzzling, though, that the god would take that priest. I never thought much of Hor-ent-yotf. Always considered him a dangerous fanatic. Shows how wrong even I can be."

"A memorable man," murmured Eratosthenes.

In silence they watched a riverside village pass. The river had now risen to the stage where the house-clusters were accessible only by causeways and moles. The brown people had drawn back into their reed and wattle cone-roofed huts to let father Hapi drop his bounty. In a couple of months the waters would recede. The farmers would sow their wheat and barley, and finally they would reap. Four months of flood and receding water, four months of sowing and growing, four of harvest and drying up.

Then repeat. And repeat. They had been doing this for more than fifty centuries. From time to time conquerors had flowed in, then out again, like waves on the seashore. Nubians... Hyksos... Assyrians... Persians. And now the Greeks. A million Greeks, up and down the river. How long would *we* last? Who throws *us* out? Rome? Carthage? "Majesty," said Eratosthenes, "what happened to those two ambassadors?"

"Interesting, that. They both got word that Panormus, on Sicily, fell to the Roman besiegers. Barca was recalled to Sicily to organize the Carthaginian guerrillas. Pulcher will return to Rome to organize an army to fight Barca. It's all insane, isn't it? What will they do with Sicily? Who cares? But Sicily isn't really the point, is it?"

Eratosthenes shrugged. "No. Actually, there are two points: one is greed, the other conquest. If Carthage wins, her greedy ships will sail west to Cipangu... the Indies... perhaps in our generation. They sail for trade and profit. If Rome wins, we will not see the antipodes for a thousand years. They go nowhere they cannot conquer. And they move only on roads."

"I fear I must agree," said Ptolemy. "We Greeks used to go out to colonize. But that spirit is dead. It died five hundred years ago." The pharaoh's nose twitched. He looked back toward the incense tripods on the stern of the yacht. "We cover the smell of death with other smells." The braziers burned balsam, carnation, anise, and the blossoms of assorted flowers.

Eratosthenes smiled. He didn't really care for the artificial smells either. Actually, he preferred the river odors: willows, reeds, orchards, palms, fish (living and dead), the dung of humans and beasts, all venerated by this massive rising water and its suggestion of distant melting snows. He studied the beads of condensate on the chill sides of his silver goblet.

Ptolemy was watching him. "It's cooled with crushed ice. Improves the tang and fights the heat. The locals prefer their beer warm. Do you realize they have never seen ice? They don't even have a word for it in their language."

"Curious," said Eratosthenes absently. Ice... snow... he mused. I made a special map of the Nile, beyond the cataracts, south to the confluence of the Blue and White Nile. Melting snow... that's what starts the yearly flood. Snow on far, equatorial mountains. Vast mountain ranges, far to the south. And feeder lakes. Big ones, inland seas. Some day we'll find them.

Ptolemy squinted around toward the ladies. "The priests are putting on quite a show at Thebes, in the great temple of Karnak. We would all be honored if the Betrothed-of-Horus could open the ceremonies."

"So it is written," said Eratosthenes gravely.

"Good. Settled. Religion, true religion, keeps a country alive, don't you agree, dear Eratosthenes?"

"Oh, quite."

"You've read Herodotus, of course. You recall that the Greeks at Marathon called on the great god Pan to terrify the Persians, and he did, and we won."

(Not to mention, we had a very smart general, thought Eratosthenes.)

"And you know," continued Ptolemy, "that Athena her-self saved our fleet at Salamis. She was actually seen to alight on the prow of Themistocles' flagship."

"So I recall."

"So then, quite aside from the appearance of Horus last night, it is plain that the gods exist, and have been with us from the beginning. Clearly, they control human affairs. We must yield to the gods in all things, Eratosthenes. When science and religion conflict, science must yield."

Ptolemy took the geometer's silence for assent. "Did I ever tell you of the great Alexander's journey to the shrine of Ammon, at Siwah?"

(Many times, thought Eratosthenes.) "I don't seem to re-call..."

"Well then. My father, the first Ptolemy, told it to me. Storms had completely obliterated the desert roads. Nothing to be seen but a sandy waste. The priests wanted to turn back. 'No,' said Alexander. 'If I am truly a natural son of Ammon, the god will send a guide.' And no sooner than spoken, here were these two serpents, rising out of the hot sands. 'Follow us,' they said, and off they went..."

(Wasn't it two ravens last time? thought Eratosthenes.) "Amazing," he said.

"He said to her, 'Be fruitful; be merry.' "

The map-maker had to think a moment. "Yes, the god Horus, to Ne-tiy."

"Not to you, though, Eratosthenes. Nothing merry about geometry."

"No."

"My father knew Euclid, who wrote his Elements back there in Alexandria. Father tried to plow through the Elements. Tough going. Complained to the master, there should be an easier way. Euclid replied, 'My lord, there is no royal road to geometry.' Father was so impressed that he founded the chair of mathematics at the Library. We've had a world-renowned geometer there ever since. Including you, young fellow."

"I am honored. And grateful."

"Actually, things turned out rather well for you."

"Yes."

To their rear the young women were talking in low tones. He heard a strange tinkling sound, as of little silver bells. He started to turn, then stopped. He knew what it was. Ne-tiy had laughed. He had never heard her laugh before. He re-laxed and looked out over the river, to the west. The sun was a glowing semicircle, growing smaller and smaller as it dropped below the darkening hills.

"Gizeh," said Ptolemy, shading his eyes as he pointed into the sunset. "Have you ever seen the pyramids?"

"Yes, sire. But perhaps the ladies..."

The two women were already at the rail, looking out over the distant sands. The men joined them. They were all thrall'd to silence by the three immense structures.

Egypt, O Egypt, thought Eratosthenes. Land of cyclopean architecture and bestial gods. Where does awe leave off and disgust begin?

Twilight was brief. The sailors were already lighting lamps along the ship's walkways. Upriver, along the shore, more lights were visible. Torches, thought the mathematician. A lot of them. And the sound of sistras and tambourines, with shouting and singing and much merriment. The whole city was turning out to greet the pharaoh.

"We're coming into Memphis," said Ptolemy. "I'll have to join in the temple ceremonies, and Pauni and I will sleep in the palace tonight. You can join us, or you can remain on board."

"If it please you, we'll stay."

"I thought you might. You and the priestess may have my quarters. Everything is prepared. Until tomorrow, then."

## **17. Khor's Globe**

Ne-tiy watched with uneasy curiosity as Eratosthenes opened the chest and carefully removed the little statue of Atlas, his back and arms still bent to receive his as yet invisible burden.

"I see writing on the base. An inscription in Greek," she said. "What does it say?"

"It says, 'Tell my friends I have done nothing unworthy of philosophy.'—Hermius."

"What does it mean? And who was he, this Hermius?"

"Hermius was a Greek who studied with Aristotle, under Plato. He was captured by the Persians and tortured. He said these words, and then he died."

"I see. You admire him."

"Very much." From another compartment he pulled out the ball that Khor had tossed to him on the balcony. Bigger than his fist, smaller than his head. It fit exactly on the titan's back.

"What is *that*?" whispered Ne-tiy.

"The world globe. Khor made it, and gave it to me as he left."

They both studied it in silence. It was clear she did not understand. Perhaps it was just as well. He was not sure *he* understood. It might have been better if Khor had never come. No, that wasn't so. He was very lucky that Khor had come.

But this globe... the artifact was far ahead of its time.

(She stole an uneasy look at his face.)

My great world map, he thought, over which I have labored so many years... compared to this it is almost nothing. A bare 80 degrees out of 360. We have not even scratched the surface. Most of the world is still out there, unknown, undiscovered. Who will be the first to find it? I wish I were a great sea captain. I'd take a dozen ships. Sail out through the Pillars of Hercules. Due west. Into the west-ern hemisphere. And there meet those two great continents. How to get around them? Perhaps a northwest passage through the north polar sea? Or around the southern tip of the southern land giant? And then on, for a complete circumnavigation of the globe.

He sighed. Not in his lifetime. Perhaps not in a hundred years. Maybe not even in a thousand. But eventually ships would go forth to that new land. And find what? Cities? Savages? Strange animals and plants? No way to tell.

Back to Earth, map-maker! He pressed the globe's north polar cap with his index finger. There was a click, and a tiny spot of light began to pulse, on and off, on the facing side of the sphere.

Ne-tiy gasped. "What is that?"

"The light simply marks the spot where we are. See?" He pointed. "We are *here*, at Memphis. See the river? Yesterday the light point was on Alexandria, on the Great Green. In five days it will be at Thebes. Calm down, it won't hurt you. Down here is the rest of Africa. Above, Italy, Gaul, Iberia, the Tin Islands, Thule. East, India, Seres, Cipangu."

"Are there really such places?"

"Yes. Do you want to see the other side?"

"... I don't know."

"Well, then, we won't look."

"Can you turn off the little light? It's like the eye of Horus, watching us."

He laughed, but turned it off. "You know what Homer said."

"What did Homer say?"

"Though all gods and goddesses look on, yet I gladly sleep with golden Aphrodite.' "

"I have a better one," said Ne-tiy. (For she knew she held the ultimate refutation of all science: geodetics... math... cartography... the rising of stars... the solstice of suns.) "*Aie se philo*—I love thee forever." She held out her arms.

*MORNING CHILD* Gardner Dozois

*Technology advances much more quickly than usual during times of war, and even the technology that's been developed previously has been kept very secret, so despite our expectations World War III, if it should ever happen, would probably surprise most of us with unforeseen, even fantastic weapons. Gardner Dozois realizes that, and in this very short story he presents us with the results of a strange weapon indeed.*

*Gardner Dozois is not only the editor of many science fiction anthologies but also the author of numerous short stories, novel-ettes and novellas that are well worth reading, including those in his collection The Visible Man.*

The old house had been hit by something sometime during the war and mashed nearly flat. The front was caved in as though crushed by a giant fist: wood pulped and splintered, beams protruding at odd angles like broken fingers, the second floor collapsed onto the remnants of the first. The rubble of a chimney covered everything with a red mortar blanket. On the right a gaping hole cross-sectioned the ruins, laying bare all the strata of fused stone and plaster and charred wood—everything curling back on itself like the lips of a gangrenous wound. Weeds had swarmed up the low hillside from the road and swept over the house, wrapping the ruins in wildflowers and grapevines, softening the edges of destruction with green.

Williams brought John here almost every day. They had lived here once, in this house, many years ago, and although John's memory of that time was dim, the place seemed to have pleasant associations for him, in spite of its ruined condition. John was at his happiest here and would play contentedly with sticks and pebbles on the shattered stone steps, or go whooping through the tangled weeds that had turned the lawn into a jungle, or play-stalk in ominous circles around Williams while Williams worked at filling his bags with blueberries, daylilies, Indian potatoes, dandelions, and other edible plants and roots.

Even Williams took a bittersweet pleasure in visiting the ruins, although coming here stirred memories that he would rather have left undisturbed. There was a pleasant melancholy to the spot and something oddly soothing about the mixture of mossy old stone and tender new green, a reminder of the inevitability of cycles—life-in-death. death-in-life.

John erupted out of the tall weeds and ran laughing to where Williams stood with the foraging bags. "I been fight-ing dinosaurs!" John said. "Great *big* ones!" Williams smiled crookedly and said, "That's good." He reached down and ruffled John's hair. They stood there for a second, John panting like a dog from all the running he'd been doing, his eyes bright, Williams letting his touch linger on the small, tousled head. At this time of the morning, John seemed always in motion, motion so continuous that it gave nearly the illusion of rest, like a stream of water that looks solid until something makes it momentarily sputter and stop.

This early in the day, John rarely stopped. When he did, as now, he seemed to freeze solid, his face startled and intent, as though he were listening to sounds that no one else could hear. At such times Williams would study him with painful intensity, trying to see himself in him, sometimes succeeding, sometimes failing, and wondering which hurt more, and why.

Sighing, Williams took his hand away. The sun was getting high, and they'd better be heading back to camp if they wanted to be there at the right time for the heavier chores. Slowly, Williams bent over and picked up the foraging bags, grunting a little at their weight as he settled them across his shoulder—they had done very well for themselves this morning.

"Come on now, John," Williams said, "time to go," and started off, limping a bit more than usual under the extra weight. John, trotting alongside, his short legs pumping, seemed to notice. "Can I help you carry the bags?" John said eagerly. "Can I? I'm big enough!" Williams smiled at him and shook his head. "Not yet, John," he said. "A little bit later, maybe."

They passed out of the cool shadow of the ruined house and began to hike back to camp along the deserted highway.

The sun was baking down now from out of a cloudless sky, and heat-bugs began to chirrup somewhere, producing a harsh and metallic stridulation that sounded amazingly like a buzz saw. There were no other sounds besides the souging of wind through tall grass and wild wheat, the tossing and whispering of trees, and the shrill piping of John's voice. Weeds had thrust up through the macadam—tiny, green fin-gers that had cracked and buckled the road's surface, chopped it up into lopsided blocks. Another few years and there would be no road here, only a faint track in the undergrowth—and then not even that. Time would erase everything, burying it beneath new trees, gradually building new hills, laying down a fresh landscape to cover the old. Already grass and vetch had nibbled away the corners of the sharper curves, and the wind had drifted topsoil onto the road. There were saplings now in some places, growing green and shivering in the middle of the highway, negating the faded signs that pointed to distances and towns.

John ran ahead, found a rock to throw, ran back, circling around Williams as though on an invisible tether. They walked in the middle of the road, John pretending that the faded white line was a tightrope, waving his arms for balance, shouting warnings to himself about the abyss creatures who would gobble him up if he should misstep and fall.

Williams maintained a steady pace, not hurrying: the epit-ome of the ramrod-straight old man, his snow-white hair gleaming in the sunlight, a bush knife at his belt, an old Winchester 30.30 slung across his back—although he no longer believed that they'd need it. They weren't the only people left in the world, he knew—however much it felt like it sometimes—but this region had been emptied of its population years ago, and since he and John had returned this way on their long journey up from the south, they had seen no one else at all. No one would find them here.

There were traces of buildings along the way now, all that was left of a small country town: the burnt-out spine of a roof ridge meshed with weeds; gaping stone foundations like bat-tlements for dwarfs; a ruined water faucet clogged with spiderwebs; a shattered gas pump inhabited by birds and rodents. They turned off onto a gravel secondary road, past the burnt-out shell of another filling station and a dilapidated roadside stand full of windblown trash. Overhead a rusty traffic light swayed on a sagging wire. Someone had tied a big orange-and-black hex sign to one side of the light, and on the other side, the side facing away from town and out into the hostile world, was the evil eye, painted against a white background in vivid, shocking red. Things had gotten very strange during the Last Days.

Williams was having trouble now keeping up with John's ever-lengthening stride, and he decided that it was time to let him carry the bags. John hefted the bags easily, flashing his strong white teeth at Williams in a grin, and set off up the last long slope to camp, his long legs carrying him up the hill at a pace Williams couldn't hope to match. Williams swore good-naturedly, and John laughed and stopped to wait for him at the top of the rise.

Their camp was set well back from the road, on top of a bluff, just above a small river. There had been a restaurant here once, and a corner of the building still stood, two walls and part of the roof, needing only the tarpaulin stretched across the open end to make it into a reasonably snug shelter. They'd

have to find something better by winter, of course, but this was good enough for July, reasonably well hidden and close to a supply of water.

Rolling, wooded hills were around them to the north and east. To the south, across the river, the hills dwindled away into flatland, and the world opened up into a vista that stretched to the horizon.

They grabbed a quick lunch and then set to work, chopping wood, hauling in the nets that Williams had set across the river to catch fish, carrying water, for cooking, up the steep slope to camp. Williams let John do most of the heavy work. John sang and whistled happily while he worked, and once, on his way back from carrying some firewood to the shelter, he laughed, grabbed Williams under the arms, boosted him into the air, and danced him around in a little circle before setting him back down on his feet again.

"Feeling your oats, eh?" Williams said with mock severity, looking up into the sweaty face that smiled down at him.

"*Somebody* has to do the work around here," John said cheerfully, and they both laughed. "I can't wait to get back to my outfit," John said eagerly. "I feel much better now. I feel *terrific*. Are we going to stay out here much longer?" His eyes pleaded with Williams. "We can go back soon, can't we?"

"Yeah." Williams lied, "we can go back real soon."

But already John was tiring. By dusk his footsteps were beginning to drag, and his breathing was becoming heavy and labored. He paused in the middle of what he was doing, put down the woodchopping ax, and stood silently for a moment, staring blankly at nothing.

His face was suddenly intent and withdrawn, and his eyes were dull. He swayed unsteadily and wiped the back of his hand across his forehead. Williams got him to sit down on a stump near the improvised fireplace. He sat there silently, staring at the ground in abstraction while Williams bustled around, lighting a fire, cleaning and filleting the fish, cutting up dandelion roots and chicory crowns, boiling water. The sun was down now, and fireflies began to float above the river, winking like fairy lanterns through the velvet darkness.

Williams did his best to interest John in supper, hoping that he'd eat something while he still had some of his teeth, but John would eat little. After a few moments he put his tin plate down and sat staring dully to the south, out over the darkened lands beyond the river, just barely visible in the dim light of a crescent moon. His face was preoccupied and glum and beginning to get jowly. His hairline had retreated in a wide arc from his forehead, creating a large bald spot. He worked his mouth indecisively several times and at last said, "Have I been... ill?"

"Yes, John," Williams said gently. "You have been ill."

"I can't... I can't *remember*," John complained. His voice was cracked and husky, querulous. "Everything's so confused. I can't keep things *straight*."

Somewhere on the invisible horizon, perhaps a hundred miles away, a pillar of fire leapt up from the edge of the world.

As they watched, startled, it climbed higher and higher, towering miles into the air, until it was a slender column of brilliant flame that divided the sullen, black sky in two from ground to stratosphere. The pillar of fire blazed steadily on the horizon for a minute or two, and then it began to coruscate, burning green and blue and silver and orange, the colors flaring and flickering fitfully as they merged into one another. Slowly, with a kind of stately and awful symmetry, the pillar broadened out to become a flattened diamond shape of blue-white fire. The diamond began to rotate slowly on its axis, and as it rotated it grew eye-searingly bright. Gargantuan, unseen shapes floated around the blazing diamond, like moths beating around a candle flame, throwing huge, tangled shadows across the world.

Something with a huge, melancholy voice hooted, and hooted again, a forlorn and terrible sound that

beat back and forth between the hills until it rumbled slowly away into silence.

The blazing diamond winked out. Hot white stars danced where it had been. The stars faded to sullenly glowing orange dots that flickered away down the spectrum and were gone.

It was dark again.

The night had been shocked silent. For a while that silence was complete, and then slowly, tentatively, one by one, the crickets and tree frogs began to make their night sounds again.

"The war—" John whispered. His voice was reedy and thin and weary now, and there was pain in it. "It still goes on?"

"The war got... strange," Williams said quietly. "The longer it lasted, the stranger it got. New allies, new weapons—" He stared off into the darkness in the direction where the fire had danced; there was still an uneasy shimmer to the night air on the horizon, not quite a glow. "You were hurt by such a weapon, I guess. Something like *that*, maybe." He nodded toward the horizon, and his face hardened. "I don't know. I don't even know what *that* was. I don't understand much that happens in the world anymore... Maybe it wasn't even a weapon that hurt you. Maybe they were experimenting on you biologically before you got away. Who knows why? Maybe it was done deliberately—as a punishment or a reward. Who knows how they think? Maybe it was a side effect of some device designed to do something else entirely. Maybe it was an accident; maybe you just got too close to something like *that* when it was doing whatever it is it does." Williams was silent for a moment, and then he sighed. "Whatever happened, you got to me afterward somehow, and I took care of you. We've been hiding out ever since, moving from place to place."

They had both been nearly blind while their eyes readjusted to the night, but now, squinting in the dim glow of the low-burning cooking fire, Williams could see John again. John was now totally bald, his cheeks had caved in, and his dulled and yellowing eyes were sunken deeply into his rav-aged face. He struggled to get to his feet, then sank back down onto the stump again. "I can't—" he whispered. Weak tears began to run down his cheeks. He started to shiver.

Sighing, Williams got up and threw a double handful of pine needles into boiling water to make white-pine-needle tea. He helped John limp over to his pallet, supporting most of his weight, almost carrying him—it was easy; John had become shrunken and frail and amazingly light, as if he were now made out of cloth and cotton and dry sticks instead of flesh and bone. He got John to lie down, tucked a blanket around him in spite of the heat of the evening, and concentrated on getting some of the tea into him.

He drank two full cups before his fingers became too weak to hold the cup, before even the effort of holding up his head became too great for him. John's eyes had become blank and shiny and unseeing, and his face was like a skull, earth-brown and blotched, with the skin drawn tightly over the bones.

His hands plucked aimlessly at the blanket; they looked mummified now, the skin as translucent as parchment, the blue veins showing through beneath.

As the evening wore on, John began to fret and whine incoherently, turning his face blindly back and forth, muttering random fragments of words and sentences, sometimes raising his voice in a strangled, gurgling shout that had no words at all in it, only bewilderment and outrage and pain. Williams sat patiently beside him, stroking his shriveled hands, wiping sweat from his hot forehead.

"Sleep now," Williams said soothingly. John moaned and whined in the back of his throat. "Sleep. Tomorrow we'll go to the house again. You'll like that, won't you? But sleep now, sleep—"

At last John quieted, his eyes slowly closed, and his breathing grew deeper and more regular.

Williams sat patiently by his side, keeping a calming hand on his shoulder. Already John's hair was beginning to grow back, and the lines were smoothing out of his face as he melted toward childhood.



When Williams was sure that John was asleep, he tucked the blanket closer around him and said, "Sleep well, Fa-ther," and then slowly, passionately, soundlessly, he started to weep.

### *THE ALIENS WHO KNEW, I MEAN, EVERYTHING*

George Alec Effinger

*An interesting thing has happened during the evolution of the science fiction genre: many sf stories have portrayed our world being saved—or destroyed—by beings from far stars rather than by God. In essence, God has been replaced in science fiction by creatures from planets orbiting other stars. Perhaps that isn't surprising in our technological era, but George Alec Effinger's short story here has some thoughts that may be as new and comical to you as they are to me.*

*George Alec Effinger has written many short stories and nov-els during the past fifteen years; the latter include What Entropy Means to Me and The Wolves of Memory.*

I was sitting at my desk, reading a report on the brown pelican situation, when the secretary of state burst in. "Mr. President," he said, his eyes wide^ "the aliens are here!" Just like that. "The aliens are here!" As if I had any idea what to do about them.

"I see," I said. I learned early in my first term that "I see" was one of the safest and most useful comments I could possibly make in any situation. When I said, "I see," it indicated that I had digested the news and was waiting intelli-gently and calmly for further data. That knocked the ball back into my advisers' court. I looked at the secretary of state expectantly. I was all prepared with my next utterance, in the event that he had nothing further to add. My next utterance would be, "Well?" That would indicate that I was on top of the problem, but that I couldn't be expected to make an executive decision without sufficient information, and that he should have known better than to burst into the Oval Office unless he had that information. That's why we had protocol; that's why we had proper channels; that's why I had advisers. The voters out there didn't want me to make decisions with-out sufficient information. If the secretary didn't have any-thing more to tell me, he shouldn't have burst in in the first place. I looked at him awhile longer. "Well?" I asked at last.

"That's about all we have at the moment," he said uncom-fortably. I looked at him sternly for a few seconds, scoring a couple of points while he stood there all flustered. I turned back to the pelican report, dismissing him. I certainly wasn't going to get all flustered. I could think of only one president in recent memory who was ever flustered in office, and we all know what happened to him. As the secretary of state closed the door to my office behind him, I smiled. The aliens were probably going to be a bitch of a problem eventually, but it wasn't my problem yet. I had a little time.

But I found that I couldn't really keep my mind on the pelican question. Even the president of the United States has *some* imagination, and if the secretary of state was correct, I was going to have to confront these aliens pretty damn soon. I'd read stories about aliens when I was a kid, I'd seen all sorts of aliens in movies and television, but these were the first aliens who'd actually stopped by for a chat. Well, I wasn't going to be the first American president to make a fool of himself in front of visitors from another world. I was going to be briefed. I telephoned the secretary of defense. "We must have some contingency plans drawn up for this," I told him. "We have plans for every other possible situation." This was true; the Defense Department has scenarios for such bizarre events as the rise of an imperialist fascist regime in Liechtenstein or the spontaneous depletion of all the world's selenium.

"Just a second, Mr. President," said the secretary. I could hear him muttering to someone else. I held the phone and stared out the window. There were crowds of people running around hysterically out

there. Probably because of the aliens. "Mr. President?" came the voice of the secretary of defense. "I have one of the aliens here, and he suggests that we use the same plan that President Eisenhower used."

I closed my eyes and sighed. I hated it when they said stuff like that. I wanted information, and they told me these things knowing that I would have to ask four or five more questions just to understand the answer to the first one. "You have an alien with you?" I said in a pleasant enough voice.

"Yes, sir. They prefer not to be called 'aliens.' He tells me he's a 'nuhp.' "

"Thank you, Luis. Tell me, why do you have an al— Why do you have a nuhp and I don't."

Luis muttered the question to his nuhp. "He says it's because they wanted to go through proper channels. They learned about all that from President Eisenhower."

"Very good, Luis." This was going to take all day, I could see that; and I had a photo session with Mick Jagger's grand-daughter. "My second question, Luis, is what the hell does he mean by 'the same plan that President Eisenhower used'?"

Another muffled consultation. "He says that this isn't the first time that the nuhp have landed on Earth. A scout ship with two nuhp aboard landed at Edwards Air Force Base in 1954. The two nuhp met with President Eisenhower. It was apparently a very cordial occasion, and President Eisenhower impressed the nuhp as a warm and sincere old gentleman. They've been planning to return to Earth ever since, but they've been very busy, what with one thing and another. President Eisenhower requested that the nuhp not reveal themselves to the people of Earth in general, until our government decided how to control the inevitable hysteria. My guess is that the government never got around to that, and when the nuhp departed, the matter was studied and then shelved. As the years passed, few people were even aware that the first meeting ever occurred. The nuhp have returned now in great numbers, expecting that we'd have prepared the populace by now. It's not their fault that we haven't. They just sort of took it for granted that they'd be welcome."

"Uh-huh," I said. That was my usual utterance when I didn't know what the hell else to say. "Assure them that they are, indeed, welcome. I don't suppose the study they did during the Eisenhower administration was ever completed. I don't suppose there really is a plan to break the news to the public."

"Unfortunately, Mr. President, that seems to be the case."

"Uh-huh." That's Republicans for you, I thought. "Ask your nuhp something for me, Luis. Ask him if he knows what they told Eisenhower. They must be full of outer-space wis-dom. Maybe they have some ideas about how we should deal with this."

There was yet another pause. "Mr. President, he says all they discussed with Mr. Eisenhower was his golf game. They helped to correct his putting stroke. But they are definitely full of wisdom. They know all sorts of things. My nuhp—that is, his name's Hurv—anyway, he says that they'd be happy to give you some advice."

"Tell him that I'm grateful, Luis. Can they have someone meet with me in, say, half an hour?"

"There are three nuhp on their way to the Oval Office at this moment. One of them is the leader of their expedition, and one of the others is the commander of their mother ship."

"Mother ship?" I asked.

"You haven't seen it? It's tethered on the Mall. They're real sorry about what they did to the Washington Monument. They say they can take care of it tomorrow."

I just shuddered and hung up the phone. I called my secretary. "There are going to be three—"

"They're here now, Mr. President."

I sighed. "Send them in." And that's how I met the nuhp. Just as President Eisenhower had.

They were handsome people. Likable, too. They smiled and shook hands and suggested that photographs be taken of the historic moment, so we called in the media; and then I had to sort of wing the most important diplomatic meeting of my entire political career. I welcomed the nuhp to Earth. "Wel-come to Earth," I said, "and welcome to the United States."

"Thank you," said the nuhp I would come to know as Pleen. "We're glad to be here."

"How long do you plan to be with us?" I hated myself when I said that, in front of the Associated Press and UPI and all the network news people. I sounded like a room clerk at a Holiday Inn.

"We don't know, exactly," said Pleen. "We don't have to be back to work until a week from Monday."

"Uh-huh," I said. Then I just posed for pictures and kept my mouth shut. I wasn't going to say or do another goddamn thing until my advisers showed up and started advising.

Well, of course, the people panicked. Pleen told me to expect that, but I had figured it out for myself. We've seen too many movies about visitors from space. Sometimes they come with a message of peace and universal brotherhood and just the inside information mankind has been needing for thousands of years. More often, though, the aliens come to enslave and murder us because the visual effects are better, and so when the nuhp arrived, everyone was all prepared to hate them. People didn't trust their good looks. People were suspicious of their nice manners and their quietly tasteful clothing. When the nuhp offered to solve all our problems for us, we all said, sure, solve our problems—but *at what cost?*

That first week, Pleen and I spent a lot of time together, just getting to know one another and trying to understand what the other one wanted. I invited him and Commander Toag and the other nuhp bigwigs to a reception at the White House. We had a church choir from Alabama singing gospel music, and a high school band from Michigan playing a medley of favorite collegiate fight songs, and talented clones of the original stars nostalgically re-creating the Steve and Eydie Experience, and an improvisational comedy troupe from Los Angeles or someplace, and the New York Philharmonic under the baton of a twelve-year-old girl genius. They played Beethoven's Ninth Symphony in an attempt to impress the nuhp with how marvelous Earth culture was.

Pleen enjoyed it all very much. "Men are as varied in their expressions of joy as we nuhp," he said, applauding vigor-ously. "We are all very fond of human music. We think Beethoven composed some of the most beautiful melodies we've ever heard, anywhere in our galactic travels."

I smiled. "I'm sure we are all pleased to hear that," I said.

"Although the Ninth Symphony is certainly not the best of his work."

I faltered in my clapping. "Excuse me?" I said.

Pleen gave me a gracious smile. "It is well known among us that Beethoven's finest composition is his Piano Concerto No. 5 in E-flat major."

I let out my breath. "Of course, that's a matter of opinion. Perhaps the standards of the nuhp—"

"Oh, no," Pleen hastened to assure me, "taste does not enter into it at all. The Concerto No. 5 is Beethoven's best, according to very rigorous and definite critical principles. And even that lovely piece is by no means the best music ever produced by mankind."

I felt just a trifle annoyed. What could this nuhp, who came from some weirdo planet God alone knows how far away, from some society with not the slightest connection to our heritage and culture, what could this nuhp know of what Beethoven's Ninth Symphony aroused in our human souls?

"Tell me, then, Pleen," I said in my ominously soft voice, "what *is* the best human musical composition?"

"The score from the motion picture *Ben-Hur*, by Miklos Rozsa," he said simply. What could I do but nod my head in silence? It wasn't worth starting an interplanetary incident over.

So from fear our reaction to the nuhp changed to distrust. We kept waiting for them to reveal their real selves; we waited for the pleasant masks to slip off and show us the true nightmarish faces we all suspected lurked beneath. The nuhp did not go home a week from Monday, after all. They liked Earth, and they liked us. They decided to stay a little longer. We told them about ourselves and our centuries of trouble; and they mentioned, in an offhand nuhp way, that they could take care of a few little things, make some small adjustments, and life would be a whole lot better for everybody on Earth. They didn't want anything in return. They wanted to give us these things in gratitude for our hospitality: for letting them park their mothership on the Mall and for all the free refills of coffee they were getting all around the world. We hesitated, but our vanity and our greed won out. "Go ahead," we said, "make our deserts bloom. Go ahead, end war and poverty and disease. Show us twenty exciting new things to do with leftovers. Call us when you're done."

The fear changed to distrust, but soon the distrust changed to hope. The nuhp made the deserts bloom, all right. They asked for four months. We were perfectly willing to let them have all the time they needed. They put a tall fence all around the Namibia and wouldn't let anyone in to watch what they were doing. Four months later, they had a big cocktail party and invited the whole world to see what they'd accomplished. I sent the secretary of state as my personal representative. He brought back some wonderful slides: the vast desert had been turned into a botanical miracle. There were miles and miles of flowering plants now, instead of the monotonous dead sand and gravel sea. Of course, the immense garden contained nothing but hollyhocks, many millions of hollyhocks. I mentioned to Pleen that the people of Earth had been hoping for a little more in the way of variety, and something just a trifle more practical, too.

"What do you mean, 'practical'?" he asked.

"You know," I said, "food."

"Don't worry about food," said Pleen. "We're going to take care of hunger pretty soon."

"Good, good. But hollyhocks?"

"What's wrong with hollyhocks?"

"Nothing," I admitted.

"Hollyhocks are the single prettiest flower grown on Earth."

"Some people like orchids," I said. "Some people like roses."

"No," said Pleen firmly. "Hollyhocks are it. I wouldn't kid you."

So we thanked the nuhp for a Namibia full of hollyhocks and stopped them before they did the same thing to the Sahara, the Mojave, and the Gobi.

On the whole, everyone began to like the nuhp, although they took just a little getting used to. They had very definite opinions about everything, and they wouldn't admit that what they had were *opinions*. To hear a nuhp talk, he had a direct line to some categorical imperative that spelled everything out in terms that were unflinchingly black and white. Hollyhocks were the best flowers. Alexander Dumas was the greatest novelist. Powder blue was the prettiest color. Melancholy was the most ennobling emotion. *Grand Hotel* was the finest movie. The best car ever built was the 1956 Chevy Bel Air, but it had to be aqua and white. And there just wasn't room for discussion: the nuhp made these pronouncements with the force of divine revelation.

I asked Pleen once about the American presidency. I asked him who the Nuhp thought was the best president in our history. I felt sort of like the Wicked Queen in "Snow White." Mirror, mirror, on the wall.

I didn't really believe Pleen would tell me that I was the best president, but my heart pounded while I waited for his answer; you never know, right? To tell the truth, I expected him to say Washington, Lincoln, Roosevelt, or Akiwara. His answer surprised me: James K. Polk.

"Polk?" I asked. I wasn't even sure I could recognize Polk's portrait.

"He's not the most familiar," said Pleen, "but he was an honest if unexciting president. He fought the Mexican War and added a great amount of territory to the United States. He saw every bit of his platform become law. He was a good, hardworking man who deserves a better reputation."

"What about Thomas Jefferson?" I asked.

Pleen just shrugged. "He was O.K., too, but he was no James Polk."

My wife, the First Lady, became very good friends with the wife of Commander Toag, whose name was Doim. They often went shopping together, and Doim would make suggestions to the First Lady about fashion and hair care. Doim told my wife which rooms in the White House needed redecoration, and which charities were worthy of official support. It was Doim who negotiated the First Lady's recording contract, and it was Doim who introduced her to the Philadelphia cheese steak, one of the nuhp's favorite treats (although they asserted that the best cuisine on Earth was Tex-Mex).

One day, Doim and my wife were having lunch. They sat at a small table in a chic Washington restaurant, with a couple of dozen Secret Service people and nuhp security agents disguised elsewhere among the patrons. "I've noticed that there seem to be more nuhp here in Washington every week," said the First Lady.

"Yes," said Doim, "new mother ships arrive daily. We think Earth is one of the most pleasant planets we've ever visited."

"We're glad to have you, of course," said my wife, "and it seems that our people have gotten over their initial fears."

"The hollyhocks did the trick," said Doim.

"I guess so. How many nuhp are there on Earth now?"

"About five or six million, I'd say."

The First Lady was startled. "I didn't think it would be that many."

Doim laughed. "We're not just here in America, you know. We're all over. We really like Earth. Although, of course, Earth isn't absolutely the best planet. Our own home, Nupworld, is still Number One; but Earth would certainly be on any Top Ten list."

"Un-huh." (My wife has learned many important oratorical tricks from me.)

"That's why we're so glad to help you beautify and modernize your world."

"The hollyhocks were nice," said the First Lady. "But when are you going to tackle the really vital questions?"

"Don't worry about that," said Doim, turning her attention to her cottage cheese salad.

"When are you going to take care of world hunger?"

"Pretty soon. Don't worry."

"Urban blight?"

"Pretty soon."

"Man's inhumanity to man?"

Doim gave my wife an impatient look. "We haven't even been here for six months yet. What do you

want, miracles? We've already done more than your husband accomplished in his entire first term."

"Hollyhocks," muttered the First Lady.

"I heard that," said Doim. "The rest of the universe absolutely *adores* hollyhocks. We can't help it if humans have no taste."

They finished their lunch in silence, and my wife came back to the White House fuming.

That same week, one of my advisers showed me a letter that had been sent by a young man in New Mexico. Several nuhp had moved into a condo next door to him and had begun advising him about the best investment possibilities (urban respiratory spas), the best fabrics and colors to wear to show off his coloring, the best holo system on the market (the Esmeraldas F-64 with hex-phased Libertad screens and a Ruy Challenger argon solipsizer), the best place to watch sunsets (the revolving restaurant on top of the Weyerhauser Building in Yellowstone City), the best wines to go with everything (too numerous to mention—send SASE for list), and which of the two women he was dating to marry (Candi Marie Esterhazy). "Mr. President," said the bewildered young man, "I realize that we must be gracious hosts to our bene-factors from space, but I am having some difficulty keeping my temper. The nuhp are certainly knowledgeable and willing to share the benefits of their wisdom, but they don't even wait to be asked. If they were people, regular human beings who lived next door, I would have punched their lights out by now. Please advise. And hurry: they are taking me downtown next Friday to pick out an engagement ring and new living room furniture. I don't even *want* new living room furniture!"

Luis, my secretary of defense, talked to Hurv about the ultimate goals of the nuhp. "We don't have any goals," he said. "We're just taking it easy."

"Then why did you come to Earth?" asked Luis.

"Why do you go bowling?"

"I don't go bowling."

"You should," said Hurv. "Bowling is the most enjoyable thing a person can do."

"What about sex?"

"Bowling is sex. Bowling is a symbolic form of inter-course, except you don't have to bother about the feelings of some other person. Bowling is sex without guilt. Bowling is what people have wanted down through all the millennia: sex without the slightest responsibility. It's the very distillation of the essence of sex. Bowling is sex without fear and shame."

"Bowling is sex without pleasure," said Luis.

There was a brief silence. "You mean," said Hurv, "that when you put that ball right into the pocket and see those pins explode off the alley, you don't have an orgasm?"

"Nope," said Luis.

"*That's* your problem, then. I can't help you there, you'll have to see some kind of therapist. It's obvious this subject embarrasses you. Let's talk about something else."

"Fine with me," said Luis moodily. "When are we going to receive the real benefits of your technological superiority? When are you going to unlock the final secrets of the atom? When are you going to free mankind from drudgery?"

"What do you mean, 'technological superiority'?" asked Hurv.

"There must be scientific wonders beyond our imagining aboard your mother ships."

"Not so's you'd notice. We're not even so advanced as you people here on Earth. We've learned all sorts of wonder-ful things since we've been here."

"What?" Luis couldn't imagine what Hurv was trying to say.

"We don't have anything like your astonishing bubble memories or silicon chips. We never invented anything com-parable to the transistor, even. You know why the mother ships are so big?"

"My God."

"That's right," said Hurv, "vacuum tubes. All our space-craft operate on vacuum tubes. They take up a hell of a lot of space. And they burn out. Do you know how long it takes to find the goddamn tube when it burns out? Remember how people used to take bags of vacuum tubes from their televi-sion sets down to the drugstore to use the tube tester? Think of doing that with something the size of our mother ships.

And we can't just zip off into space when we feel like it. We have to let a mother ship warm up first. You have to turn the key and let the thing warm up for a couple of minutes, *then* you can zip off into space. It's a goddamn pain in the neck."

"I don't understand." said Luis, stunned. "If your tech-nology is so primitive, how did you come here? If we're so far ahead of you, we should have discovered your planet, instead of the other way around."

Hurv gave a gentle laugh. "Don't pat yourself on the back, Luis. Just because your electronics are better than ours, you aren't necessarily superior in any way. Look, imagine that you humans are a man in Los Angeles with a brand-new Trujillo and we are a nuhp in New York with a beat-up old Ford. The two fellows start driving toward St. Louis. Now, the guy in the Trujillo is doing 120 on the interstates, and the guy in the Ford is putting along at 55; but the human in the Trujillo stops in Vegas and puts all of his gas money down the hole of a blackjack table, and the determined little nuhp cruises along for days until at last he reaches his goal. It's all a matter of superior intellect and the will to succeed. Your people talk a lot about going to the stars, but you just keep putting your money into other projects, like war and popular music and international athletic events and resurrecting the fashions of previous decades. If you wanted to go into space, you would have."

"But we *do* want to go."

"Then we'll help you. We'll give you the secrets. And you can explain your electronics to our engineers, and together we'll build wonderful new mother ships that will open the universe to both humans and nuhp."

Luis let out his breath. "Sounds good to me," he said.

Everyone agreed that this looked better than hollyhocks. We all hoped that we could keep from kicking their collective asses long enough to collect on that promise.

When I was in college, my roommate in my sophomore year was a tall, skinny guy named Barry Rintz. Barry had wild, wavy black hair and a sharp face that looked like a handsome, normal face that had been sat on and folded in the middle. He squinted a lot, not because he had any defect in his eyesight, but because he wanted to give the impression that he was constantly evaluating the world. This was true.

Barry could tell you the actual and market values of any object you happened to come across.

We had a double date one football weekend with two girls from another college in the same city. Before the game, we met the girls and took them to the university's art museum, which was pretty large and owned an impressive collection. My date, a pretty elementary ed. major named Brigid, and I wandered from gallery to gallery, remarking that our tastes in art were very similar. We both like the Impressionists, and we both like Surrealism. There were a couple of little Renoirs that we admired for almost half an hour, and then we made a lot of silly sophomore jokes about what was happening in the Magritte and Dali and de Chirico paintings.

Barry and his date, Dixie, ran across us by accident as all four of us passed through the sculpture gallery. "There's a terrific Seurat down there," Brigid told her girlfriend.

"Seurat," Barry said. There was a lot of amused disbelief in his voice.

"I like Seurat," said Dixie.

"Well, of course," said Barry, "there's nothing really *wrong* with Seurat."

"What do you mean by that?"

"Do you know F. E. Church?" he asked.

"Who?" I said.

"Come here." He practically dragged us to a gallery of American paintings. F. E. Church was a remarkable American landscape painter (1826-1900) who achieved an astonishing and lovely luminance in his works. "Look at that light!" cried Barry. "Look at that space! Look at that air!"

Brigid glanced at Dixie. "Look at that air?" she whispered.

It was a fine painting and we all said so, but Barry was insistent. F. E. Church was the greatest artist in American history, and one of the best the world has ever known. "I'd put him right up there with Van Dyck and Canaletto."

"Canaletto?" said Dixie. "The one who did all those pictures of Venice?"

"Those skies!" murmured Barry ecstatically. He wore the drunken expression of the satisfied voluptuary.

"Some people like paintings of puppies or naked women," I offered. "Barry likes light and air."

We left the museum and had lunch. Barry told us which things on the menu were worth ordering, and which things were an abomination. He made us all drink an obscure imported beer from Ecuador. To Barry, the world was divided up into masterpieces and abominations. It made life so much simpler for him, except that he never understood why his friends could never tell one from the other.

At the football game, Barry compared our school's quarter-back to Y. A. Tittle. He compared the other team's punter to Ngoc Van Vinh. He compared the halftime show to the Ohio State band's Script Ohio formation. Before the end of the third quarter, it was very obvious to me that Barry was going to have absolutely no luck at all with Dixie. Before the clock ran out in the fourth quarter, Brigid and I had made whispered plans to dump the other two as soon as possible and sneak away by ourselves. Dixie would probably find an excuse to ride the bus back to her dorm before suppertime. Barry, as usual, would spend the evening in our room, reading *The Making of the President 1996*.

On other occasions Barry would lecture me about subjects as diverse as American Literature (the best poet was Edwin Arlington Robinson, the best novelist James T. Farrell), animals (the only correct pet was the golden retriever), clothing (in anything other than a navy blue jacket and gray slacks a man was just asking for trouble), and even hobbies (Barry collected military decorations of czarist Imperial Russia. He wouldn't talk to me for days after I told him my father collected barbed wire).

Barry was a wealth of information. He was the campus arbiter of good taste. Everyone knew that Barry was the man to ask.

But no one ever did. We all hated his guts. I moved out of our dorm room before the end of the fall semester. Shunned, lonely, and bitter Barry Rintz wound up as a guidance counselor in a Jewish school in Ames, Iowa. The job was absolutely perfect for him; few people are so lucky in finding a career.

If I didn't know better, I might have believed that Barry was the original advance spy for the nuhp.

When the nuhp had been on Earth for a full year, they gave us the gift of interstellar travel. It was



surprisingly inexpensive. The nuhp explained their propulsion system, which was cheap and safe and adaptable to all sorts of other earthbound applications. The revelations opened up an entirely new area of scientific speculation. Then the nuhp taught us their navigational methods, and about the "shortcuts" they had discovered in space. People called them space warps, although technically speaking, the shortcuts had nothing to do with Einsteinian theory or curved space or anything like that. Not many humans understood what the nuhp were talking about, but that didn't make very much difference. The nuhp didn't understand the shortcuts, either; they just used them. The matter was presented to us like a Thanksgiving turkey on a platter. We bypassed the whole business of cautious scientific experimentation and leaped right into commercial exploitation. Mitsubishi of La Paz and Martin Marietta used nuhp schematics to begin construction of three luxury passenger ships, each capable of transporting a thousand tourists anywhere in our galaxy. Although man had yet to set foot on the moons of Jupiter, certain selected travel agencies began booking passage for a grand tour of the dozen nearest inhabited worlds.

Yes, it seemed that space was teeming with life, humanoid life on planets circling half the G-type stars in the heavens. "We've been trying to communicate with extraterrestrial intelligence for decades," complained one Soviet scientist. "Why haven't they responded?"

A friendly nuhp merely shrugged. "Everybody's trying to communicate out there," he said. "Your messages are like Publishers Clearing House mail to them." At first, that was a blow to our racial pride, but we got over it. As soon as we joined the interstellar community, they'd begin to take us more seriously. And the nuhp had made that possible.

We were grateful to the nuhp, but that didn't make them any easier to live with. They were still insufferable. As my second term as president came to an end, Pleen began to advise me about my future career. "Don't write a book," he told me (after I had already written the first two hundred pages of a *President Remembers*). "If you want to be an elder statesman, fine; but keep a low profile and wait for the people to come to you."

"What am I supposed to do with my time, then?" I asked.

"Choose a new career," Pleen said. "You're not all that old. Lots of people do it. Have you considered starting a mail-order business? You can operate it from your home. Or go back to school and take courses in some subject that's always interested you. Or become active in church or civic projects. Find a new hobby: raising hollyhocks or collecting military decorations."

"Pleen," I begged, "just leave me alone."

He seemed hurt. "Sure, if that's what you want." I regretted my harsh words.

All over the country, all over the world, everyone was having the same trouble with the nuhp. It seemed that so many of them had come to Earth, every human had his own personal nuhp to make endless suggestions. There hadn't been so much tension in the world since the 1992 Miss Universe contest, when the most votes went to No Award.

That's why it didn't surprise me very much when the first of our own mother ships returned from its 28-day voyage among the stars with only 276 of its 1,000 passengers still aboard. The other 724 had remained behind on one lush, exciting, exotic, friendly world or another. These planets had one thing in common: they were all populated by charming, warm, intelligent, humanlike people who had left their own home worlds after being discovered by the nuhp. Many races lived together in peace and harmony on these planets, in spacious cities newly built to house the fed-up expatriates. Perhaps these alien races had experienced the same internal jealousies and hatreds we human beings had known for so long, but no more. Coming together from many planets throughout our galaxy, these various peoples dwelt contentedly beside each other, united by a single common aversion: their dislike for the nuhp.

Within a year of the launching of our first interstellar ship, the population of Earth had declined by 0.5 percent. Within two years, the population had fallen by almost 14 million. The nuhp were too sincere and

too eager and too sympathetic to fight with. That didn't make them any less tedious. Rather than make a scene, most people just up and left. There were plenty of really lovely worlds to visit, and it didn't cost very much, and the opportunities in space were unlimited. Many people who were frustrated and disappointed on Earth were able to build new and fulfilling lives for themselves on plan-ets that until the nuhp arrived, we didn't even know existed.

The nuhp knew this would happen. It had already happened dozens, hundreds of times in the past, wherever their mother ships touched down. They had made promises to us and they had kept them, although we couldn't have guessed just how things would turn out.

Our cities were no longer decaying warrens imprisoning the impoverished masses. The few people who remained behind could pick and choose among the best housing. Landlords were forced to reduce rents and keep properties in perfect repair just to attract tenants.

Hunger was ended when the ratio of consumers to food producers dropped drastically. Within ten years, the popula-tion of Earth was cut in half, and was still falling.

For the same reason, poverty began to disappear. There were plenty of jobs for everyone. When it became apparent that the nuhp weren't going to compete for those jobs, there were more opportunities than people to take advantage of them.

Discrimination and prejudice vanished almost overnight. Everyone cooperated to keep things running smoothly despite the large-scale emigration. The good life was available to everyone, and so resentments melted away. Then, too, what-ever enmity people still felt could be focused solely on the nuhp; the nuhp didn't mind, either. They were oblivious to it all.

I am now the mayor and postmaster of the small human community of New Dallas, here on Thir, the fourth planet of a star known in our old catalog as Struve 2398. The various alien races we encountered here call the star by another name, which translates into "God's Pineal." All the aliens here are extremely helpful and charitable, and there are few nuhp.

All through the galaxy, the nuhp are considered the mes-sengers of peace. Their mission is to travel from planet to planet, bringing reconciliation, prosperity, and true civiliza-tion. There isn't an intelligent race in the galaxy that doesn't love the nuhp. We all recognize what they've done and what they've given us.

But if the nuhp started moving in down the block, we'd be packed and on our way somewhere else by morning.

### *A DAY IN THE SKIN (OR, THE CENTURY WE WERE OUT OF THEM)*

Tanith Lee

*When we go out to colonize the planets of other stars, odds are that there will be unexpected catastrophes. Science fiction has told of such things often, but we must bear in mind that by the time we achieve interstellar travel our technology will be greatly advanced, so we may by then have the means to cope with great problems. Of course, coping will always remain basically a human task, as Tanith Lee shows in this story.*

*Tanith Lee is one of the most accomplished science fiction writers of the past ten years, in both short stories and novels. She's been so prolific and accomplished that even a sample list of her books would be impractical; this story will give an example of why that's true.*

And the first thing you more or less think when you get Back is: God, where's everything gone? (Just as, similarly, when you get Out you more or less think, Hey where's all this coming from?) Neither thought is rational, simply out-raged instinct. The same as, coming Back, it seems for a moment stone silent, blind dark and ice cold. It's none of those. It's nothing. In a joking mood, some of us have been known to refer to it, this—what shall I call it? this *place*—as Sens-D (sensory deprivation). It isn't though, because when your Outward senses—vision, hearing, smell, taste, touch— when they go off, other things come on. The a/fer-senses. Hard to describe. For a time, you reckon them as compensa-tion, stand-ins, like eating, out in the skin world, a cut of sausage when you hankered for a steak. Only in a while it stops being that. It becomes steak. The equivalent senses are just fine, although the only non-technical way I can come up with to express them *is* in terms of equivalents, alternatives. And time itself is a problem, in here, or down there, or where the hell ever. Yes, it passes. One can judge it. But one rarely does, after the first months. In the first months you're con-stantly pacing, like some guy looking at his watch: Is it time yet? Is it time now? Then that cools off. Something happens, in here, down there... So that when at last the impulse comes through *Time to get up* (or *Out*) you turn lazily, like a fish in a pool (equivalents), and you equivalently say, Oh really? Do I have to?

"Sure, Scay. You do have to. It's in the Company con-tract. And if I let you lie, there'd be all hell and hereafter to pay H.Q. Not to mention from you, when you finally get Out for keeps."

So I alter-said, in the way the impulse can assimilate and send on, "How long, and what is it?"

"One day. One huge and perfect High Summer day. Forty-two hours. And you got a good one, Scay, listen, a real beauty."

"Male or female?"

"A/ee-male."

"All right. I can about remember being female."

"First female for you for ten years, ah? *Exciting*."

"Go knit yourself a brain."

Dydoo, who manages the machines, snuffled and whined, which I alter-heard now clearly, as he set up my ride. I tried to pull myself together for the Big Wrench. But you never manage it. Suddenly you are whirling down a tunnel full of fireworks, at the end of which you explode inside a mass of stiff jelly. And there I was, flailing and shrieking, just as we all flail and shriek, in the middle of a support couch in the middle of Transfer.

"Husha hush," said the machines, and gentle firm me-chanical arms held me and held me down.

Presently I relapsed panting—yes, panting. *Air*.

"Look up," said Dydoo. I looked. Things flashed and tickered. "Everything's fine. You can hear me? See me?"

"I can even smell you," I gasped, tears streaming down my face, my heart crashing like surf on the rocks. There was a dull booming pain in my head I cared for about as much as Dydoo cared for my last remark. "Dydoo," I continued, speech not coming easy, "who had this one last? I think they gave it a cranial fracture."

"Nah, nah. 'S all right. Mike tied one on with the wine and brandy-pop. It's pumped full of vitamins and de-tox. Should take about a hundred and fifteen seconds more, and you'll feel just dandy, you rat."

I lay there, waiting for Mike Plir's hangover to go away, and watched, with my borrowed eyes, Dydoo bustling round the shiny bright room. He is either a saint or a masochist (or are they the same?). Since one of us has to oversee these particular machines, he agreed to be it, and so he took the only living quarters permanently available. The most highly developed local fauna is a kind of dog-like

creature, spinally adapted for walking upright, like the Terran ape, and with articulated forepaws and jaw. With a little surgery, this nut-brown woolly beast, with its floppy ears and huge soulful eyes, was all ready for work, and thus for Dydoo.

"My, Dydoo," I said, "you look real sweet today. Come on over, I'll give you a bone."

"Shurrrup," growled Dydoo. No doubt, these tired old jests get on his furry nerves.

Once my skull stopped booming, I got up and went to look at myself in the unlikely pier-glass at one end of the antiseptic room.

"Well, I remember this one. This used to be Miranda."

There she stood, twenty-five, small, curvy, a little heavy but nice, creamy gold, with long fair hair down to her second cluster of dimples.

"Yeah. Good stuff," said Dydoo, deciding yet again; he doesn't or can't afford to hold a grudge more than a minute.

"How long, I wonder, before I get a go at my own—"

"Now you know it doesn't work like that, Scay. Don't you? Hah?"

"Yes, I know it doesn't. Just lamenting, Dydoo. Tell me, who had me Out last time?"

"Vundar Cope. And he broke off a bit."

"*What?* Hexos Christ! Which bit?"

"Just kidding," said Dydoo. "If you're worried, I'll take you over to the Store, and let yah look."

"No thanks, for Chrissake. I don't like seeing myself that way."

"Okay. And try to talk like a lady, can't you?"

"Walkies, Dydoo," I snarled. "*Fetch!*"

"Ah, get salted."

It took me a couple of quivery hours to grow accustomed to being in Miranda's body; correction, Fern. Sub. 68. I bruised my hips a lot, trying to get between and by furniture that was no longer wide enough for me. The scented bath and the lingerie were exciting all right. But not in the right way, I'd been male in the beginning and much of the time after, and I'd had a run of being male for every one of my fifty-one days a year Out for ten, eleven years. That's generally how it's designated, unless an adventurous preference is stated. Stick with what you're used to. But sometimes you must take what you can get. I allowed a while before I left Transfer, to see to a couple of things. The lingerie and the mirrors helped. It was a safe bet, I probably wouldn't be up (to mis-coin a phrase) to any straight sex this holiday. Besides, I didn't know who else was Out, and Dydoo had gotten so grouchy in the end, I hadn't bothered to ask. Normally there are around forty to fifty people in the skin on any given day. Amounts of time vary, depending on how the work programs pan out and the "holiday" schedules have built up. My day, I now re-called, was a free diurnal owing to me from last year, that the Company had never yet made up. Perfect to the letter, our Company. After all, who wants to get sued? Not that anyone who sues ever wins, but it's messy.

I wondered, as the moving ramp carried me out into town, just what Dydoo was getting paid to keep him woofing along in there.

The first body I passed on Mainstreet was Fedalin's, and it gave me the creeps, the way it still sometimes does, because naturally it wasn't Fedalin inside. Whoever was, was giving it a heck of a time. Red-rimmed eyes, drug-smoked irises, shaking hands and faltering feet. To make matters worse, the wreck blew a bleary whistle after Miranda's stacking. I didn't stop to belt him. My lady's stature and her

soft fists were of use only in one sort of brawl. I could see, I thought, nor for the first, why the Company rules keep your own personal body in the Store whenever you yourself are Out. It means you never get into your own skin, but then too, there are never any overlaps, during which you might meet yourself on the sidewalk with some other bastard driving. Pandemonium that would be, trying to throttle them, no doubt, for the lack of care they were taking with your precious goods—and only, of course, ending up throttling yourself. In a manner. Al-though I didn't like looking at my own battered old (thirty-five) skin lying there, in ice, like a fish dummy, in the Store, I had once or twice gone over and compulsively peeked. The second occasion, not only gave me the shivers, but I'd flown into a wow of a rage because someone had taken me Out for a week's leave and put ten pounds on my gut. Obviously, the machines would get that off in a few days. (The same as lesions, black eyes, and stomach ulcers get got rid of. The worst I ever heard tell of was a cancerous lung that required one whole month of cancer-antibodies, which is twice as long as it takes to cure it in a body that's occupied.) But there, even so, you get upset, you can't help it. So it's on the whole better not to go and look, though H.Q. says it's okay for you to go and look—which is to prove to us all our skins are still around in the public lending library. Goddamn it.

The contract says (and we all have a contract) that as soon as the Bank is open for Business (five years it's supposed to be now, but five years ago they said that, too) we all go Back into our own bodies. Or into new improved bodies, or into new improved versions of our old bodies, or—you name it. A real party, and we all get a prize. When it all started, around eighty years ago, that is, once everybody had settled after the initial squalling matches, Violent Scenes, hysteria, etc., some of us got a wild thrill out of the novelty. Pebka-Sol, for example, has it on record always, where possible, to come Out as a lady. And when he finally gets a skin of his own again, that is due to be a lady, also. But Pebka-Sol lost his own skin, the true, masculine one, so he's entitled. I guess we're the lucky ones, me, Fedalin, Miranda, Christof, Haro— those of us that didn't lose anything as a result of the Acci-dent. Except, our rights...

I try to be conscientious, myself, I really do. But handling Miranda was going to be a drag. She's a lot littler than me, or than I'm used to, and her capacity is a lot less. I'm used to drinking fairly hard, but hard was the word it was going to be on her, if I tried that; plus she'd already been doused by some jack, yesterday. I walked into the bar on Mainstreet, the bar we used to hit in gabbling droves long, long ago under the glitter-kissed green dusk, when we were our own men and women. No one was there now, though Fedalin's haunt had just walked him out the door. I dialed a large pink Angel and put it, a sip at a time, into Miranda's insides, to get her accustomed. "Here's not looking at you, kid," I toasted her.

I had that weird feeling I recollect I had when I first scooped a female body from the draw forty odd years ago. Shock and disorientation, firstly. Then a turn-on, racy, kinky, great. I'd got to the stage now of feeling I was on a date, dating Miranda, only I *was* Miranda. My first lady had been Qwainie, and Qwainie wasn't my type, which in the long run made things easier faster. But Miranda is my type. Oh my yes. (Which is odd in a way as the only woman I ever was really serious with—well, she wasn't like Miranda at all.) So I dialed Miranda another Angel, and we drank it down.

As this was happening, a tall, dark man with a tawny tan, the right weight and nothing forcing steam out of his nose and eyeballs, came into the bar. He dialed a Coalwater, the most lethal beer and alcohol mix in the galaxy (they say); one of my own preferred tipples, and sauntered over.

"Nice day, Scay."

"He knows me," said Miranda's soft cute voice with the slight lisp.

"The way you drink, feller," he said.

I had emptied the glass, and Miranda's ears were faintly ringing. I'd have to wait a while for the girl to catch up.

"Well, if he knows me that well, then I'll hazard on who he is."

"Win, and he'll stand you a Coalwater."

"The lady wouldn't like that. Anyway. Let's try Haro Fielding."

"Hole in one."

"Well, fancy that. They let us Out the same time again."

Haro, whom I thought was in the skin of one of the tech. people whose name I had mislaid, grinned mildly.

"I've been Out a couple of weeks. Tin and irradium traces over south. Due Back In tomorrow noon. You?"

"Forty-two hours."

"Hard bread."

"Yeah."

We stared into our glasses, mine empty, and I wished sweet Miranda would buck up and stop ringing so I could drink some more. Haro's rig had been auspicious, a tall dark man just like Haro's own body. But he'd treated it with respect. That was Haro Fielding all over, if you see what I mean. A really nice guy, super intelligent, intellectual, all that, and sound, as about nothing but people ever are, and that rarely, let me add. We had been working together on the asti-manganese traces the other side of the Rockies when the Accident happened, back here in town. That was how we two kept our skins. I remember we were down a tunnel scraping away, with the analysis robot-pack clunking about in the debris, when the explosion ripped through the planet's bow-els. It was a low, thrumming vibration, where we were, more than a bang. We were both a pair of tall guys, but Haro taller than me, with one of the best brains I ever came across. And he stood up and crashed this brain against the tunnel-ceiling and nearly knocked himself out. "What the F was that?" I asked, after we'd gotten ourselves together. "It sounded," said Haro to me, "like the whole of Base Town just blew up, hit the troposphere, and fell back down again." He wasn't far out.

We made it back through the rock hills in the air-buggy inside twenty minutes. When we came over the top and saw the valley full of red haze and smoke and jets of steam, I was scared as hell. You could hear alarm bells and sirens going, but the smog was too thick to work out what kind of rescue went on and what was just automatic noise and useless. I sat in the driver's seat, gunning the buggy forward, and swearing and half crying. And Haro said, "It's okay."

"Of course it's not bloody okay. Look at it—there's no goddamn thing left—"

"Hey," he said, "calm down."

"Calm *down*! You're crazy. No, I'm not just shaken up over who may have just died in that soup. I'm pissing myself that if it's all gone, we'll never get off this guck-heeled planet alive."

The point being that planet NX 5 (whereon we are) is sufficient distance from H.Q. that it had taken our team, the "pioneer squad" every expert Company sends in ahead of itself, to explore, to test, to annotate, to break open for the use of Man, had taken us, I started to say, around thirty Terran years to arrive. We'd traveled cryogenically, of course, deep-frozen in our neat little cells, and that was how we'd get back when it was time. Only if Base had blown up, then maybe the ship had blown up, too, plus all the life supports, the S.O.S.'s—every darling thing. Naturally, if reports suddenly stopped coming in, the Company would investigate. But it would take thirty years before anything concrete got here. Though NX 5 is a gallant sight, with its pyramidal rocks rich in hidden ores, its dry forests and cold pastel deserts busy with interesting flora and fauna, and its purling pale lemon skies... it doesn't offer a human much damn anything to get by on. While the quaint doggies that roam the lands, barking and walking upright, joy of the naturalist, had a few times tried to tear some of us to pieces. Marooned without proper supplies, shelter or defense: with nothing—that was a fate and three-quarters.

"We'll be dead in half a month," I said.

"To die—to sleep, no more," Haro muttered, and I began to think the blow on the head had knocked him silly, so it'd be a half month shared with a lunatic at that.

However. We careered down into the smoke, and the first thing, a robot machine came up and ordered us off to a safety point. Events, it seemed, weren't so bad as they looked. Matters were in (metal) hand.

The short High Winter day drew to its end under cover of the murk, and we sat in the swimming pool building on the out-skirts, which had escaped the blast. Other survivors had come streaming and racketing in. There were about ninety of us crammed round the pool, eating potato chips and nuts and drinking cold coffee, which were all the rations the pool machines, on quarter-power, would give us. Most of the survivors had been away on recon., or various digs, or other stuff, like Haro and me. A handful with minor injuries, caught around the periphery of Base Town, were in the underground medical sanatorium which, situated northside, was unscathed. There were some others, too, a third of the planet away on field studies, who had yet to find out. It seemed that the core in the third quadrant of Base's energy plant had destabilized, gone critical and—wham. The blast was of course "clean," but that was all you could say for it. The third quadrant (Westtown) had gone down a molten crater, and most of the rest of the place had reacted the way a pile of loose bricks might do in a scale 9 earthquake. That means, too, people die.

By dawn the next chill day, we had the figures. There had been around five thousand of us on-world, what with the primary team, and the back-up personnel—shipmen, ground crew, service, mechanics and techies. Out of those men and women, one thousand nine hundred and seventy-three were now dead. What we felt and said about that I won't repeat now, there's nothing worse than a bad case of *requiemitis*.

Some of them were pals, you see. And a couple of them, well. Well, one of them was once practically my wife, only we never made it that far, parted, stayed friends (cliche). Yep. *Requiemitis*. Let's get on.

Aside from the dead, there were a lot of gruesomely in-jured down in the San., nearly three thousand of them. While the hospital machineries could keep them out of pain and adequately alive, the mess they were in required one form of surgery only. The form that's discreetly known on Earth as Rebo, and is normally only for the blazing rich. Rebo, or the transfer of the ego, with all its memories, foibles, shining virtues and fascinating defects, from one body (for some reason a wash-out—crippled, pan-cancerous—what you will) to another, is only carried out in extreme cases. And indeed the business was hushed up for years, then said not to work, then said not to be in use. It happened though, that our Very Own Company was one of the sponsors of the most advanced Rebo (re-bodying) techniques. Again, on Earth and the Earth Worlds, there are laws that limit transfer strictly. (And, natu-rally, there are religious sects who block the Sunday news abhorring the measure.) In our case, though... we were different, weren't we? A heroic advance guard on a remote planet, needed to carry out vital work, etc.; and all that.

Those were the first tidings of comfort and joy; figures of death and injury and rumors of Rebo. It threw us about somewhat. I noticed that the machines started to serve us hot food and alcohol about this juncture. Then Haro and I got plastered to the plaster, and I stopped noticing. The second gospel came on about an hour later.

Now, an ego that's transferred, where doth it go? It goeth into another body, natch. Fine. Generally it's a grown body—android—tissue and cells. That can take anything from a trio of months to a year, dependent on format and specifications, and, let it be whispered, on the amount of butter you can spread. Sometimes, too, there have allegedly been transfers into the recently dead bodies of others. (There is supposed to be a gal in Appeline, New Earth, who bought her way into the pumped-out body of a movie

star, dead of an overdose. Apocryphal perhaps.) Or even of animals. (There's a poem about that one: Please, God, make of me a panther, A pretty panther, to please me, Pretty please, Hexos or Javeh or Pan, There is no God but the god who can— Make me a panther, please.)

That—I mean, grown androids—is what should have hap-pened here. Approaching three thousand bodies for those that, alive only on support systems, needed them. Trouble was— you guessed it—the tissue banks that would have begun the project were over in Westtown and blown to tomorrow. It would take thirty years to get us some more.

The only facilities they had were the remains of the cryo-genic storage (the ship had caught the blast), whole if de-pleted berths for about two hundred, into which three thousand persons were not going to fit. And another outfit, of which we knew little, but which would act, apparently, as the interim point of the transferral operation, a kind of waiting room between bodies. Mostly, a transfer flashes the subject through that *place* so fast it's just a nonstop station on the way. Yet, this area, too, was it seemed capable of storing. Storing an ego. And its capacity was *unlimited*.

Just as requiems can be tedious, rehashing old action re-plays of panic and mayhem can get one down. So, I'll just spin the outline for those of us who like it in the big bold type.

The Company, who had gotten word of the latest position via the beacon intercom, had a proposition to offer us. And for proposition, read Fact. For we who are Company Persons know we belong to our Company, body and—yes, let's hear it for laughs—*soul*.

The Company would like us to stay on, and hang in there. This was how: The survivors of the Accident (and isn't that a lovesome name for it?) about one hundred and fifty people of both sexes, would donate their bodies to a common fund. Now, and let me stress this, around one hundred and fifty bodies put out like pairs of pants and dresses for the use of—one deep breath—over three thousand footloose egos. For the life supports would be switched off and the liberated bodiless egos of the mortally wounded taken into the wonderful—what shall I call it?—*place*—that stored unlim-ited egos within its unlimited capacity. And into that *place* also, would go the liberated egos of those whose "skins" had not been damaged, those skins now the property of All. And here in the *place* we would all live, not crowded, for the disembodied are not crowded, lords and ladies of infinite space, inside a nutshell. Then, when it was our allotted time physically to work or play, Out we would come and get in a body. Not our own. That would hardly be fair, would it?

Make those who had lost their own bodies for good feel jealous. (For that reason, no one gets finally supplied from the Bank or the Store until *everyone* gets supplied. Suits for all or none at all.) Anyway, there might be a slip-up. Yes, slips-up happen, like cores destabilizing. Gray vibes to meet oneself on the street in thrall to another. And in thirty years the androids would start growing like beautiful orchids in their tanks. And in maybe sixty years (or a bit longer, we're starting from scratch, remember, and not geared in the first place to do it) there'll be suits for all, bodies for everyone. New bodies, old familiar bodies, loved ones, forgotten ones—ah, the com-post with it. It stank. And we shrilled and howled and argued and screamed. And we ended up in it to our eyebrows.

I recall wandering in a long drunk, and Haro, tall and dark and tawny, then as now, and drunk as me, said to me: "Calm down, Scay. They may blow it and kill us."

"But I don't want to be killed, pal."

"Nothing to it," said Haro. "Something to look forward to."

"My God, you still remember that," said Haro, draining his Coalwater.

Miranda's ears had stopped dinging.

"Say, Miranda, would you care for another?" I asked her in her own honeyed voice. "Of course I remember, you turkey. Get killed. Boy."



"Although Sens-D. is a sort of death. You realize that, Scay?"

"Yes. Surely. Only I'm not dead in there. In there stops me getting dead. You know, I was thinking, it's funny—" ("You thinking is funny? You're right there," interpolates Haro) "—You get in a skin and you come Out and you feel wrong, and you feel okay, all at the same moment. And if you stay with the skin a while, weeks, a month at a time, especially if you're working in it—it starts to feel natural. As if you always had it. Or something very like it, even if it isn't like it. Take Miranda here, I could get used to Miranda. Seems unlikely now, but I know from past experience I could, and would. Meanwhile, the—*place*—that starts to seem alien and frightening all over. So you can hardly stand to go Back there. And now and then, you need their drugs to stop you kicking and screaming on the way to Transfer, as if you were going off to get shot in the skull. And yet—"

"And yet?" said Haro, looking at me quietly with the other man's dark eyes.

"And yet, no one mentions it, but we all know, I suppose. When you come Out, there's the Big Wrench. It's yellow murder coming through into a new body. But when you go Back/n—"

"No Wrench."

"No Wrench. Just like slipping into cool water and drifting there. I know there's sometimes a disorientation—it's cold, I've gone blind—that stuff. But it happens less and less, doesn't it? The last time I went Back. Hell, Haro. It was like gliding out of a lump of lead."

"And how do you feel about working, in Sens-D.?"

I narrowed Miranda's gorgeous sherry eyes. Haro called it by the slang name, always, and I knew Haro. He was doing that just because, to him, "sensory deprivation" meant noth-*ing* of the sort, and he'd acknowledged it.

"I work fine down, up, In there. I do. When they started asking us to work that way, assessments, work-ups, lay-outs—the ideas stuff we used to do prowling round a desk—I thought it'd be a farce. But it's—stimulating, right? And then the assimilator passes on what you do, puts it in words Outside. I sometimes wonder how much talent gets lost just fumbling around in the physical after words—"

"And did you know," said Haro, "that some of the best work any of us ever did is coming out of our disembodied egos in Sens-D.?"

I swore. "Ger-eat. That means we'll be stuck in there more and more. If the sweetheart Company found *that* out, they'll fix our contracts and—"

"But you just said, Scay, it's good In there."

"Devil's advocate. Come on. Where's the Coalwater you promised Miranda?"

He got the drinks and we drank them, and the conversation turned, because Company maneuvers and all the Company Likes and Wants can be disquieting. There have been nights in the skin I have lain and wondered, there, if the Company might not have arranged it all, even the Accident, just to see how we make out, what happens to us, in the *place*, or in the skin of another guy. Which is crazy, crazy. Sure it is.

Anyhow, Haro was due Back tomorrow, and I had only thirty-seven more hours left.

\* \* \*

Rebuilt, and glamorized to make us happy, once we were stuck here for a century or so, Base Town was a strange sight, white as meringue against NX 5's lemon sky. Made in the beginning for the accommodation, researches and plea-sures of a floating population of two thousand, you now seldom saw more than twenty people on the streets at a time. For whom now did the bright lights sparkle, and the musics play, the eateries beckon, the labs invite and the libraries yawn? Who races the freeway,

swims the pool? Who rides the carousel? And, baby, ask not for whom the bell tolls. With the desert blowing beyond the dust traps on all sides, and sand-blown craters of the west, the Rockies over there, frowning down, where weird whippy birds go flying in the final spasms of sunset—Base has the look of an elegant surreal ghost town. It's as if everyone has died, after all. The ones you see are only ghosts out for a day in the skin.

A new road goes west, off to that ship the machines are still working on. Haro and I walked out to the road, paused, looked up it into distance, but made no move to do more. Once, years ago, we all went to see what progress they were making on the getting-home stakes. So the road had occasional traffic, some buggy or jetcar pattering or zooming along, like a dragonfly with wings of silver dust. Not any more. Oh they'll get the ship ready in time, it's in the contracts, in time for the new bodies, so we can all go to sleep for thirty years and wake up home in H.Q., which isn't home. Who cares, anyway. What's home, *who's* home, to hurry for? Thirty years older, sixty years, one hundred and sixty. And we, the Children of the Ice, are the same as always. Live forever, and sell your soul to the Company Store.

"Hey, Haro, what do we do now?"

We discussed possibles. We could take a jeep out into the desert and track a pack of doggies, bring back a lady doggy and give it to Dydoo (who'd not smile). We could swim, eat curry, nap in the Furlough, walkabout, eat pizza, go to a movie. We did those. The film was *Jiarmennon*, sent out to our photo-tape receptors inside a year of its release on the Earth Worlds, by the kindly Company. A terrific epic, huge screen, come-at-you effects, sound that goes through the back of the cerebellum and ends up cranking the pelvis. One of those marvelous entertainments that exactly combine action, spectacle and profound thought. I admit, some of the pro-found thought I didn't quite latch on to. But the overall was something plus. Five hours, with intervals. Three other people in the theater. One of them, the one in Fedalin, was asleep or passed out.

When we came forth, the afternoon bloomed full across the town, a primrose sunshade for two suns, and it was sad enough to make you spit.

"Miranda's hormones are starting to pick up. Did she have crying jags, do you know?"

We walked across to the Indoor Jardin, the one place we hadn't yet re-seen. In the ornamental pond, the bright fish live and die and are taken away, and new bred bright fish put in. Maybe it was the last Coalwater taken in the Sand Bar on East, but I, or Miranda's body, began suddenly to weep.

"Goddamn it, Miranda, leave it out, will you? I've only got you for another ten hours, and you do this to me. *Quit*, Miranda."

"Why does it have to be Miranda who's crying?" said Haro in his damn nice, damn clever way.

"Well who's it look like?"

"Looks like Miranda. Sounds like you, feller."

"Falsetto? Yeah. Well. I didn't cry since—Christ, when did I last?"

"You want me to tell you."

Belligerent, I glared at him through massed wet cilia thick as bushes. "So tell me, tell me, turkey."

"When the core blew, and took Mary with it."

"Ah. Oh, yes. Okay. Shit."

The pain of that, coming back when I hadn't expected it, stopped me crying, the way a kick in the ear can stop hiccups. You preferred the hiccups, all right?

"I'm sorry, Scay," Haro said presently. "But I think you needed to know."

"Know how I felt about—I *know*. It doesn't help."

"Sometime, it may. You wanted to be with her. And Company red tape on marriage liability got in your way and you both chickened out. But your insides didn't."

"I used to dream about it," I said sullenly. "The Acci-dent. And her, and what it must've—•"

There was a long pause, and the fish, who lived and died, burned there in the pond like votive candles.

"It's over now," said Haro. "It isn't happening to her anymore, except inside your head."

We sat on the stone terrace, and he put his arm over my Miranda's shoulders, and Miranda responded, the length of her spine.

"Miranda," I said, slightly ashamed, "wants you."

"And I notice the guy I'm wearing today fancies the heck out of Miranda."

He turned me, carefully, because I was a woman and he was much larger in build than I, and he kissed me. It was good. It got to me how good it was.

"We've never been in this position before," I muttered, in Miranda's husky voice. "As the space-captain said to the wombat.

"Never been male and female together, I mean." I elabo-rated, as our hands mutually traveled, and our mouths, and our bodies warmed and melded together like wax, and the flame lights up about the usual way, about the usual part, but, oh brother, not quite. "What I mean is, kid. If you'd tried this on when we were both male, I'd have knocked you into a cocked cuckoo-clock."

"The lady," said Haro, "doth protest too much."

So, I shut up, and we enjoyed it, Haro, Miranda, and I.

The lemon light was going to the acid of limes and the birds were tearing round the sky when we started back along Mainstreet. I hadn't gotten Miranda too drunk, but I had got her well-laid, and that was healthful for her. She had nothing to reproach me with.

"You're not, by any chance, walking me home, Haro Fielding?"

"Nope."

"Well, good. Because, when I see you again, I don't know how I'm going to live this down."

Heck, yes, I could hear myself, even the sentence-constructs were getting to be like Miranda's. That's how you grow used to what you are. I suppose it was inevitable, the other scene, he and me, sometime. Buddies. Yip.

"Don't worry too much about that," said Haro.

I shrugged. "I'll be Back In. I won't be worrying at all. That *place* is a real de-sexer, too. Genderless we go. And get Out... confused."

"That *place*," he repeated. "*In*. All that labor and all that machinery, to keep alive. When all the time, being *In* is, I'd take a bet, almost what death is."

"You said that already."

"I did, didn't I? So if that's what death is like, where's the difference?"

"The difference is, there's a guaranty on this one. You *get* there. You go on. Not like—not like Mary, blown into a million grains of sugar."

"Mary's body."

"Okay. Her *body*. I liked her body."

Haro stopped, looking up over the town at the glowing dying sky.

"Don't fool yourself. You loved Mary, not just Mary's skin. And though Miranda and this guy here were making love, you and I were making it, too."

"Oh now look—I've got nothing against—but I'm not—"

"Forget that. You're missing the doorway and coming in the garbage-shoot with catsup in your hair. What I'm saying is this, and I want you to listen to me, Scay, or you won't understand."

"What do I have to understand, buster? Hah?"

"Just listen. Sens-D. is—Christ, it's a zoo, an enclosure full of egos—of psychic, non-corporeal, unspecified, unclassified, inexplicable and *unexplained* matter, that persists out of, and detached from, the flesh. Got it?"

"I got it. So?"

"Death, Scay, is being that same psychic, non-corporeal, etc.—etc.—material—only Out of the skin *and* Out of the box."

"Yes?" I said politely, to see if he'd hit me. He didn't.

"The *place*, as you call it, is a birdcage. But look up there. That's where the birds want to be. The free wide sky."

I watched the birds in spite of myself. I thought about our extended peculiar lives in the slave gangs of the Company. Of going to sleep on ice. Of sliding into the *place*. Of days in the skin.

"That's it?" I said eventually. "All you want to tell me?"

"That's it, that's all."

We said our good-byes near the Transfer ramp.

"See you next skin," I said.

And Haro grinned and walked away.

\* \* \*

Dydoo waved an ear at me as I strolled in, "Had a nice day?"

"Divine."

Poor mutt. He'd been smoking, two trays full, and spilling over. I refrained from cracks about dog ends. What a life the man led, held in that overcoat of fur and fume. It was a young specimen that died up on the ridge, and the robots found it, cleaned out the disease, did the articulation surgery, and popped in Dydoo. Sometimes, when he gets crazy-mad enough, he'll bark. I know, I used to help make him. And you know, it isn't really funny. Bird-cage. Dog-cage.

I got ready for going Back, and Dydoo gave me my shot. I wasn't bothered today, not fighting or wanting to. I guess I haven't really been like that for years. The anguish, that had also gone, just a sort of melancholy left, almost nostalgia, for something or other. Beyond the high windows, the night was coming, reflecting on instruments and panels and in the pier-glass, till the lights came up.

"You ready now?" Dydoo peered down at me.

"Go on, lick my face, why don't you?"

"And put myself off my nice meaty bone? You should be so honored. Say, Scay? Yah know what I'm coming Out as at the end, the new body? Heh? The Hound of the Baskervilles. And I'm gonna get every last one of you half-eyed creeps and—"

Then the switches went over.

One minute you are here, and then you are—*there*—

I glided free of the lump of lead into the other world.

Three days later (that's the time they tell me it was) I made history. I spent two hours in my own skin. Yes. My very own battered thirty-five-year-old me. Hey!

My body was due, you see, for someone else, and because of what happened, they dumped me into it first. So they could thump all those questions out at me like a machine-gun. The Big Wrench. Then Dydoo yelping and growling, techies from C Block, some schmode I didn't know yelling, and a whole caboodle full of machines. I couldn't help much, and I didn't. In the end, after all the lie-check tests and print-outs and threats and the apologies for the threats, I reckon they be-lieved me that it was nothing to do with me. And then they left me to calm down in a little cubicle, to get over my own anger and my grief.

He was a knight, Haro Fielding. A good guy. He could have messed it up with muck, that borrowed skin, or thrown it off a rock or into one in a jeep, and smashed it up, unusable. Instead, he donated it, one surplus body, back to the homeless ones, the Rest of Us. All they had to do was fill it up with nice new blood, which is easy with the technology in town here.

He'd gone up into the Rockies, sat down, and opened every important vein. The blood went out like the sea and left the dry beach of Haro lying under the sky, where the search-ers found him—it. They searched because he was missing. He hadn't turned up at Transfer next day. They thought they had another battling hysteric on their hands. No use to try transfer now, obviously. The body had been dead long enough the ego and all the other incorporeal etc. were gone. Though the body was there, Haro was not.

The slightest plastic surgery would take care of the knife cuts. One fine, bonus, vacant skin. He was a gentleman, that louse.

God knows how long he'd been planning it, preparing for it in that dedicated, clear-vision crusader sort of way of his. Quite a while. And I know, if I hadn't met him Out that day, the first I'd ever have heard of it would have been from some drunk sprawled in the Star Bar, Hey, you hear? Fielding took himself out.

As it was, obliquely but for sure, Haro'd told me all of it. I should have cottoned on and tried to— Or why should I have? Each to his own. In, or is it Out? For keeps.

And I guess it's grief and anger made me laugh so hard in the calm-down cubicle. God bless the Company, and let's hear it for the one that got away. As the line says, *flying to other ills*—but flying. Home free.

Free as a bird.

#### *INSTRUCTIONS* Bob Leman

*You've read many stories of human contact with aliens, but probably none as unusual as this: it's just what its title says, a set of instructions from aliens to humans. Instructions for what? Ah, there's the rub.*

*Bob Leman has been publishing science fiction and fantasy short stories for nearly twenty years, all of them well conceived and superbly crafted. (For instance, "Window" in The Best Science Fiction of the Year #10.) This most recent story demon-strates his command of the idiom,*

*and more.*

This is the only notice you will receive.

You will follow the instructions set out below. 1.

Dress warmly and leave your house. Do not tell your family you are leaving. Do not talk to them at all. Do not listen if they talk to you. Dress warmly and leave your house.

2.

Proceed at a brisk clip to the center of town. Do not speak to anyone in the street. Do not—*do not*—become involved in any conversations. Step right along. Do not tarry.

3.

At the center of town, in the little park across from the courthouse, is a building that was not there the last time you were downtown. It will strike you as a very ugly building," and its appearance will make you feel apprehensive. Pay no attention to such feelings. Do not look right or left. Enter the building. It has only one doorway and no visible door. Go right in.

4.

You will find yourself standing in a cold gray mist, with no visibility whatever. This will cause you to feel great fear. Despite the fear, you will follow instructions. Advance six steps.

5.

A portion of your mind will remain free of the constraint that has been placed upon you, and that portion will be observing your actions with amazement, incredulity, and terror, since everything that you are doing is without your advertence, and is, as it were, puppetlike. If you survive the present undertaking, you will remember everything that has happened, but you will never be able to speak of it. You will never be able to talk about anything at all that took place after the instant you looked at the symbol at the top of the first of these sheets. The configurations of this symbol are such that it caused your mind to be wholly obedient to these instructions. You have no choice. You must do as you are instructed. Under no circumstances will you lose these sheets.

6.

From this point onward you will read only one instruction at a time. Do not read instruction number eight until you have accomplished what was instructed in number seven, and so on. Read each instruction completely before beginning to comply. Instructions from this point onward will carry from time to time comforting words of reassurance and explanation, as a means of preserving sanity in the portion of your mind that remains your own.

7.

After you have advanced six steps, stand quite still. You will immediately feel an unpleasant sensation. It will, in fact, be agonizing pain. Ignore it. It is felt by all carbon-based life-forms undergoing interdimensional translation. It will do you no permanent harm, except possibly in a minor way to your muscular coordination and control. If you find yourself thereafter to be subject to facial tics or spasmodic jerking of one limb or another, pay no attention to them. You have much to do. Bend all your efforts toward obeying these instructions. Do not falter.

8.

You are now in Area One. This one will be easy. Look about you. What you see will frighten you greatly. You will not let that fact hinder you. It is just a landscape. It is only the fact that it is totally alien that frightens you. You have never seen or imagined anything remotely like it. Words of reassurance:

26,844 members of your race have been here before you. We know all about Area One. Follow instructions and you will quickly be in Area Two. Perform the following acts: take four slow—very slow—steps forward, and immediately sidestep quickly—very quickly—to your right.

9.

The large round hole that suddenly appeared where you were standing before you sidestepped has, literally, no bottom. It is characteristic of Area One that these holes appear. Close your eyes and begin to run as fast as you can straight ahead. By fast is meant *very fast*.

10.

You have been unconscious for some time, as a consequence of running full tilt into the wall that suddenly materialized. It is characteristic of Area One that walls materialize and dematerialize. If you had not spent an unconscious period, you would not now be reading this instruction. You would have been disassembled by the indigenous energy foci. They did not sense your presence because you were unconscious. It may be that this necessary collision has damaged you to some extent. Since you are reading this, the damage was not incapacitating. The wall is no longer there. Walk forward, or crawl if you must. Pass through the discontinuity portal just ahead. You will perceive it as a shimmer in the atmosphere. The faster you pass through, the less painful it will be.

11.

You are now in Area Two. There is no need for great haste in moving on to Area Three. You may lie down and rest for several minutes. Perhaps the pain you are almost certainly undergoing will abate somewhat. Area Two is, for your race, the safest of the areas through which you must pass in completing your task. There is at this stage time for you to absorb certain knowledge that will no doubt ease the concerns that trouble the portion of your mind that continues to keep your identity. If that core of ego were to become hopelessly insane, it would affect your comprehension of these instructions, and you would be of no further use to us.

We are observing you as you proceed with your task, but we may not communicate with you except through these instructions. Our observations will enable us to amend the instructions for the one who follows you, just as you have benefited from those who preceded you. Eight hundred sixty-one members of your race have been in Area Two before you. Each was like you, a random Homo sapiens sufficiently literate to read the instructions. We have great hope that one of your race will be the individual to attain the end we desire.

We have only recently discovered your race. We find you to be docile and moderately intelligent, and physically better suited for this task than many other races. You may have other useful qualities as well that we have not yet discovered. Some life-forms have proven to be quite useless to us. We tested them thoroughly before turning to others. Between our last previous discovery of a useful race and our finding of you, we tested 773 intelligent life-forms. Twelve hundred forty-four individuals of each of these life-forms were given these instructions. Every single one perished in Area One. But you are already in Area Two, comparatively undamaged, and ready at this point to proceed, having had your state of mind improved by learning these facts.

If you are of the egg-producing sex, you will now discover that you have sprouted a thick and vile-smelling fur over large portions of your skin. If you are of the fertilizing sex, you will find yourself to have scales instead of skin. If you are not yet large enough to produce eggs or sperm, you will find growing, from various parts of your surface, horny lumps oozing a sticky fluid. These things happen to your race in Area Two. They will not affect your capacity to carry out your instructions. In each of the areas, as you proceed, phenomena will occur that are undreamed of, and indeed impossible, in your original continuum. As you proceed from area to area, you are in movement outside space and contrary to time as you perceive it; the bases of reality will differ from area to area, and your senses will react to

this shifting in often unpredictable, and, to you, always frightening ways. Pay no attention. Follow your instructions as long as you are physically able to do so.

You will by now have observed that as far as you can see in every direction the flat plain is studded with protrusions about as high as the middle joint of your walking limbs (if you are full-grown) and about as thick as your forelimbs. Each of these is topped by a spinning disk. They may be alive, but perhaps not. It does not matter. You will note that some of the disks are of one color and some of another. We cannot give you a name for the colors because our observations of your race have failed to associate the proper words with your sensory perceptions. Walk—or otherwise proceed as best you are able—among these protrusions. Find a group of the same color surrounding one of the other color. Go among them and place your hand on the disk of the center protrusion.

12.

You have now been transported through another portal, and you are in Area Three. Three hundred thirty-seven of your race have been here before you. You are becoming inured to these transitions. The pain may have been less this time. We will now tell you that we lied in Instruction 11. There was in fact danger in Area Two. Because we were unable to specify colors, the chance of you selecting the wrong color was equal to that of selecting the right color. If you had selected wrongly, the consequences would have been unfortunate, but we will not enumerate them, in the interest of preserving your serenity.

Area Three is in a universe with the same physical laws as your own; it possesses galaxies of stars, and some of these stars have planets, just as your own star does. This planet is much like your home planet. It abounds in savage life-forms, most of which eat each other. We tell you this in order that you may be alert and wary. You cannot prevail in combat with these creatures. Flee when you see one. Hide, if you can find a place.

You are standing on the bank of a small stream. You may drink from it if you require water. Keep a sharp lookout. You have a very good chance of surviving if you can hide yourself in time. Here and there you will see holes that have what appear to be tangles of roots at their bottoms. When you encounter a predator, leap into one of these holes, if there is one nearby and you have time. The holes are in fact the mouths of creatures that live underground with only their mouths exposed, and live upon whatever edible things may fall into their mouths. You are inedible to them. After a short period the creature will spit you out. By then the predator may be gone, and you can proceed. Every creature that you see will be a predator. There is no place to hide but in these mouths.

Walk upstream along the brooklet. Some of the plants are predatory. Try to avoid them. Some of them will bind you with vines and suck your blood; others will paralyze you with a sting, and engulf you for slow digestion. They are, however, by your standards, lethargic and slow moving. Watch for them and dodge out of their way. If you are not badly damaged, you can move much faster than they can. Walk upstream along the brooklet. Walk for a distance equal to about four hundred or five hundred times your body length. If you are small, or only partially grown, it may be between five hundred and six hundred times your body length.

Walk upstream along the brooklet, evading predators of every kind, until you come to a structure. This structure resembles a great mound of the nasal mucous of your race. It is about fifty times your height. It apparently has a disgusting smell. It is the nest of one of the indigenes, a creature in some ways resembling the giant reptiles once common on your world, but in other ways resembling some of your insects. It excretes the stuff of which its nest is built. Despite the semiliquid appearance of this nest, it is quite hard. The excretion hardens upon exposure to the atmosphere. Halfway up its side is an opening. Climb up, if you can, and enter. The portal you must pass through is deep inside, and will be reached by simply following the passage. The portal was of course there before the creature built its nest, and indeed has always been there. It was pure chance that led the creature to build its nest at this particular spot. The creature is unaware that the portal is there. None of these portals can be detected by life-forms native to



the area of the portal's location unless such life-forms are directed to the portals, as you were when you began this task.

Inside the nest you will find it difficult to breathe. It will not, however, be impossible. The atmosphere will be harmful to your lungs. You must proceed as rapidly as possible, in order to reach the portal before your lungs cease to function. Hanging from the ceiling of the passage will be objects that will appear to you to be thick, oily ropes swinging about. Exercise care not to be touched by them. If you are, you will be dissolved. Hurry along. If you survive, it will be impossible to miss the portal. Get through it quickly.

13.

You are in Area Four. Do not move. Do not move at all until you have read this instruction.

You are the eighteenth of your kind to reach this area. No other life-form has supplied more than five individuals who have reached it. However, your race has greater difficulties with Area Four than do the others. We cannot tell why.

As soon as you move, your shape will change. It may change to a shape that lacks the capacity for movement. If that should happen, you will of course have to remain here permanently. If, however, your new shape is capable of movement, simply go straight forward, advancing by whatever means of locomotion you can contrive under the difficulties presented by the form you have acquired. Because the geometry of this place constantly undergoes random variation, it is impossible to tell the distance to the portal at any given moment. Simply move forward until you reach it. If the portal is at this time a very great distance off, you may not reach it, as there is no way for you to obtain nourishment here, and, in any case, you may be unable to ingest nourishment in your present form.

Now you may move.

14.

You have passed through the portal and you are in Area Five. You have returned to your original shape, or something very close to it. The other member of your race who reached this point recovered its original shape in almost every particular, with perhaps some alteration of the proportions between the various parts of its body. It retained to a considerable degree the power of forward movement and an intermittent capacity for coarse manipulation of objects. No doubt you find yourself as well off, and perhaps better.

In this area the portal is close at hand. You could see it from where you now are, if it were not hidden behind that large machine. We do not know how this machine appears to you, because your perceptions do not extend to all the planes in which it has its existence. The part that falls within the range of your senses apparently is perceived by your race as a terrifying large live thing. That at any rate is our conclusion based upon the behavior of your predecessor.

The function of this machine, to describe it in an analogy that you will understand, is to take samples and analyze them. There is no way of knowing what sort of samples it was designed to analyze, except that they were evidently large—probably about the size of your head. The entities who created this machine finished their history and disappeared very long ago, at a time when your native sun was still taking form. The machine continues to operate, but perhaps no longer exactly as it was intended to. In any case, it will not permit you access to the portal until it has taken its sample.

You will have noted that these instructions are now more elaborate and explanatory than they were initially. This has been because it appears from our admittedly incomplete knowledge of the psychology of your race that you may function better if you have some comprehension of what you are doing. In the early stages it did not matter, but now you have advanced very far. While of course you have no choice but to obey the instructions, it may be that these explanations will inspire you to an added effort, or even enthusiasm.

If you are able to pass the machine, you will see the portal plainly, and you will go through it.

Now advance and let the machine take its sample. 15.

You are in Area Six. You are the first being to achieve it. Heretofore the samples taken by the machine have always been vital parts of the life-form furnishing the sample, or even the entire being. Clearly, there remains enough of you to continue to live, and to have made your way from the machine to the portal. You are a durable being, for one of your subdivision.

Area Six is the final area. There are no difficulties in this area. It is a harmless, peaceful, and, perhaps, to you, a beautiful place. Or perhaps not. We know little of your aesthetics. There are many large plants here, much resembling the trees of your native world. A small road or path winds among them. Follow the path. Along the way are streams of water from which you may drink; there are also fruits and nuts that are safe to eat for life-forms of your subdivision.

Advancing along the path from the opposite direction is another life-form. It will resemble nothing you have seen or imagined, but it is, like you, carbon-based, and, like you, has been following a set of instructions, which were much more difficult than yours. When you confront this being, reach out with any part of you that remains capable of reaching, and touch it. It is instructed to do the same to you.

The instructions following this one will be the final instructions. You may read it after you have physically touched the other creature.

Proceed.

16.

The fact that you are reading this means that you have completed the undertaking.

Your race is one of those with the characteristic of curiosity, and you will want to know our reasons for requiring you to make this journey. We will tell you.

You have on your native planet an intellectual diversion quite suitable for your minds, called *chess*. We are now playing, with another entity much like ourself, a game with distant analogies to the game of chess raised many powers in complexity. Nothing about this game would be in any way comprehensible to you, of course, and we will make no attempt to explain it. Instead, we will continue the chess analogy and tell you that while there have already been hundreds of millions of moves in this game, it remains very far from over. Millions of our chessmen are in motion upon a board that encompasses all of the past time and any point in or portion of the universe that may become useful. You and the being you have just encountered comprise jointly a minute part of one of our chess pieces. The passage through the portals on the part of each of you, and your final coming together, form part of a tiny link in a predicted chain of cause and effect that will, in a very distant future time, lead to a curious mutation in a race whose first ancestor has not yet come into being.

Unless, of course, the move by our opponent that follows this one nullifies ours. We will, in that event, make an appropriate response. You will understand that all the pieces are being moved all the time. The analogy with chess is in fact quite loose.

At some point—it will be at a time that would seem to you to be unthinkably remote—the game will be over. The loser will congratulate the winner. We and it will then invent and agree upon the rules of a new game, and it will commence.

That is what we do. You, with your curiosity, may ask: Why?

The answer is: To pass the time, to alleviate boredom.

Your curiosity is now satisfied, and we are finished with you. You are now free from the restraints imposed by these instructions, and may do as you like. If you wish to try to return to your starting place, you will find all the portals exactly where they were when you were coming here. They are open both

ways. The difficulties in each area remain unchanged, but you are quite durable. You might get back.

***THE LUCKY STRIKE*** Kim Stanley Robinson

*Stories of alternative worlds tend to be very colorful, some-times even bizarre, as sf writers imagine how different our world might have been if the Romans had colonized North America or if the dinosaurs hadn't become extinct. The alternative world in this thoughtful novelette presents a much more contemporary change in history... a change we see in the making. The result is just as important, though.*

*Kim Stanley Robinson's first novel, The Wild Shore, was nominated for the Nebula Award earlier this year. His second novel is Icehenge.*

War breeds strange pastimes. In July of 1945 on Tinian Island in the North Pacific, Captain Frank January had taken to piling pebble cairns on the crown of Mount Lasso—one pebble for each B-29 takeoff, one cairn for each mission. The largest cairn had four hundred stones in it. It was a mindless pastime, but so was poker. The men of the 509th had played a million hands of poker, sitting in the shade of a palm around an upturned crate sweating in their skivvies, swearing and betting all their pay and cigarettes, playing hand after hand after hand, until the cards got so soft and dog-eared you could have used them for toilet paper. Captain January had gotten sick of it, and after he lit out for the hilltop a few times some of his crewmates started trailing him. When their pilot Jim Fitch joined them it became an official pastime, like throwing flares into the compound or going hunting for stray Japs. What Captain January thought of the development he didn't say. The others grouped near Captain Fitch, who passed around his bat-tered flask. "Hey January," Fitch called. "Come have a shot."

January wandered over and took the flask. Fitch laughed at his pebble. "Practising your bombing up here, eh Professor?"

"Yah," January said sullenly. Anyone who read more than the funnies was Professor to Fitch. Thirstily January knocked back some rum. He could drink it any way he pleased up here, out from under the eye of the group psychiatrist. He passed the flask on to Lieutenant Matthews, their navigator.

"That's why he's the best," Matthews joked. "Always practising."

Fitch laughed. "He's best because I make him be best, right Professor?"

January' frowned. Fitch was a bulky youth, thick-featured, pig-eyed—a thug, in January's opinion. The rest of the crew were all in their mid-twenties like Fitch, and they liked the captain's bossy roughhouse style. January, who was thirty-seven, didn't go for it. He wandered away, back to the cairn he had been building. From Mount Lasso they had an over-view of the whole island, from the harbor at Wall Street to the north field in Harlem. January had observed hundreds of B-29s roar off the four parallel runways of the north field and head for Japan. The last quartet of this particular mission buzzed across the width of the island, and January dropped four more pebbles, aiming for crevices in the pile. One of them stuck nicely.

"There they are!" said Matthews. "They're on the taxiing strip."

January located the 509th's first plane. Today, the first of August, there was something more interesting to watch than the usual Superfortress parade. Word was out that General Le May wanted to take the 509th's mission away from it. Their commander Colonel Tibbets had gone and bitched to Le May in person, and the general had agreed the mission was theirs, but on one condition: one of the general's men was to make a test flight with the 509th, to make sure they were fit for combat over Japan.

The general's man had arrived, and now he was down there in the strike plane, with Tibbets and the whole first team. January sidled back to his mates to view the takeoff with them.

"Why don't the strike plane have a name, though?" Had-dock was saying.

Fitch said, "Lewis won't give it a name because it's not his plane, and he knows it." The others laughed. Lewis and his crew were naturally unpopular, being Tibbets' favorites.

"What do you think he'll do to the general's man?" Mat-thews asked.

The others laughed at the very idea. "He'll kill an engine at takeoff, I bet you anything," Fitch said. He pointed at the wrecked B-29s that marked the end of every runway, planes whose engines had given out on takeoff. "He'll want to show that he wouldn't go down if it happened to him."

"Course he wouldn't!" Matthews said.

"You hope," January said under his breath.

"They let those Wright engines out too soon," Haddock said seriously. "They keep busting under the takeoff load."

"Won't matter to the old bull," Matthews said. Then they all started in about Tibbets' flying ability, even Fitch. They all thought Tibbets was the greatest. January, on the other hand, liked Tibbets even less than he liked Fitch. That had started right after he was assigned to the 509th. He had been told he was part of the most important group in the war, and then given a leave. In Vicksburg a couple of fliers just back from England had bought him a lot of whiskies, and since January had spent several months stationed near London they had talked for a good long time and gotten pretty drunk. The two were really curious about what January was up to now, but he had stayed vague on it and kept returning the talk to the blitz. He had been seeing an English nurse, for instance, whose flat had been bombed, family and neighbors killed... But they had really wanted to know. So he had told them he was onto something special, and they had flipped out their badges and told him they were Army Intelligence, and that if he ever broke security like that again he'd be transferred to Alaska. It was a dirty trick. January had gone back to Wendover and told Tibbets so to his face, and Tibbets had turned red and threatened him some more. January despised him for that. The upshot was that January was effectively out of the war, because Tibbets really played his favorites. January wasn't sure he really minded, but during their year's training he had bombed better than ever, as a way of showing the old bull he was wrong to write January off. Every time their eyes had met it was clear what was going on. But Tibbets never backed off no matter how precise January's bombing got. Just think-ing about it was enough to cause January to line up a pebble over an ant and drop it.

"Will you cut that out?" Fitch complained. "I swear you must hang from the ceiling when you take a shit so you can practice aiming for the toilet." The men laughed.

"Don't I bunk over you?" January asked. Then he pointed. "They're going."

Tibbets' plane had taxied to runway Baker. Fitch passed the flask around again. The tropical sun beat on them and the ocean surrounding the island blazed white. January put up a sweaty hand to aid the bill of his baseball cap.

The four props cut in hard, and the sleek Superfortress quickly trundled up to speed and roared down Baker. Three-quarters of the way down the strip the outside right prop feathered.

"Yow!" Fitch crowed. "I told you he'd do it!"

The plane nosed off the ground and slewed right, then pulled back on course to cheers from the four young men around January. January pointed again. "He's cut number three, too."

The inside right prop feathered, and now the plane was pulled up by the left wing only, while the two right props windmilled uselessly. "Holy smoke!" Haddock cried. "Ain't the old bull something?"

They whooped to see the plane's power, and Tibbets' nifty arrogance.

"By God Le May's man will remember this flight," Fitch hooted. "Why, look at that! He's banking!"

Apparently taking off on two engines wasn't enough for Tibbets; he banked the plane right until it was standing on its dead wing, and it curved back toward Tinian.

Then the inside left engine feathered.

War tears at the imagination. For three years Frank January had kept his imagination trapped, refusing to give it any play whatsoever. The dangers threatening him, the effects of the bombs, the fate of the other participants in the war, he had refused to think about any of it. But the war tore at his control. That English nurse's flat. The missions over the Ruhr. The bomber just below him blown apart by flak. And then there had been a year in Utah, and the viselike grip that he had once kept on his imagination had slipped away.

So when he saw the number two prop feather, his heart gave a little jump against his sternum and helpless he was up there with Ferebee, the first team bombardier. He would be looking over the pilots' shoulder...

"Only one engine?" Fitch said.

"That one's for real," January said harshly. Despite him-self he *saw* the panic in the cockpit, the frantic rush to power the two right engines. The plane was dropping fast and Tibbets leveled it off, leaving them on a course back toward the island. The two right props spun, blurred to a shimmer. January held his breath. They needed more lift; Tibbets was trying to pull it over the island. Maybe he was trying for the short runway on the south half of the island.

But Tinian was too tall, the plane too heavy. It roared right into the jungle above the beach, where 42nd Street met their East River. It exploded in a bloom of fire. By the time the sound of the explosion struck them they knew no one in the plane had survived.

Black smoke towered into white sky. In the shocked si-lence on Mount Lasso insects buzzed and creaked. The air left January's lungs with a gulp. He had been with Ferebee there at the end, he had heard the desperate shouts, seen the last green rush, been stunned by the dentist-drill-all-over pain of the impact.

"Oh my God," Fitch was saying. "Oh my God." Mat-thews was sitting. January picked up the flask, tossed it at Fitch.

"C-come on," he stuttered. He hadn't stuttered since he was sixteen. He led the others in a rush down the hill. When they got to Broadway a jeep careened toward them and skidded to a halt. It was Colonel Scholes, the old bull's exec. "What happened?"

Fitch told him.

"Those damned Wrights," Scholes said as the men piled in. This time one had failed at just the wrong moment; some welder stateside had kept flame to metal a second less than usual—or something equally minor, equally trivial—and that had made all the difference.

They left the jeep at 42nd and Broadway and hiked east over a narrow track to the shore. A fairly large circle of trees was burning. The fire trucks were already there.

Scholes stood beside January, his expression bleak. "That was the whole first team," he said.

"I know," said January. He was still in shock, in imagina-tion crushed, incinerated, destroyed. Once as a kid he had tied sheets to his arms and waist, jumped off the roof and landed right on his chest; this felt like that had. He had no way of knowing what would come of this crash, but he had a suspicion that he had indeed smacked into something hard.

Scholes shook his head. A half hour had passed, the fire was nearly out. January's four mates were over chattering with the Seabees. "He was going to name the plane after his mother," Scholes said to the ground. "He told me that just this morning. He was going to call it *Enola Gay*."

At night the jungle breathed, and its hot wet breath washed over the 509th's compound. January stood in the doorway of his Quonset barracks hoping for a real breeze. No poker tonight. Voices were hushed, faces solemn. Some of the men had helped box up the dead crew's gear. Now most laid on their bunks. January gave up on the breeze, climbed onto his top bunk to stare at the ceiling.

He observed the corrugated arch over him. Cricketsong sawed through his thoughts. Below him a rapid conversation was being carried on in guilty undertones, Fitch at its center. "January is the best bombardier left," he said. "And I'm as good as Lewis was."

"But so is Sweeney," Matthews said. "And he's in with Scholes."

They were figuring out who would take over the strike. January scowled. Tibbets and the rest were less than twelve hours dead, and they were squabbling over who would re-place them.

January grabbed a shirt, rolled off his bunk, put the shirt on.

"Hey Professor," Fitch said. "Where you going?"

"Out."

Though midnight was near it was still sweltering. Crickets shut up as he walked by, started again behind him. He lit a cigarette. In the dark the MPs patrolling their fenced-in compound were like pairs of walking armbands. The 509th, prisoners in their own army. Fliers from other groups had taken to throwing rocks over the fence. Forcefully January expelled smoke, as if he could expel his disgust with it. They were only kids, he told himself. Their minds had been shaped in the war, by the war, and for the war. They knew you couldn't mourn the dead for long; carry around a load like that and your own engines might fail. That was all right with January. It was an attitude that Tibbets had helped to form, so it was what he deserved. Tibbets would *want* to be forgotten in favor of the mission, all he had lived for was to drop the gimmick on the Japs, he was oblivious to anything else, men, wife, family, anything.

So it wasn't the lack of feeling in his mates that bothered January. And it was natural of them to want to fly the strike they had been training a year for. Natural, that is, if you were a kid with a mind shaped by fanatics like Tibbets, shaped to take orders and never imagine consequences. But January was not a kid, and he wasn't going to let men like Tibbets do a thing to his mind. And the gimmick... the gimmick was not natural. A chemical bomb of some sort, he guessed. Against the Geneva Convention. He stubbed his cigarette against the sole of his sneaker, tossed the butt over the fence. The tropical night breathed over him. He had a headache.

For months now he had been sure he would never fly a strike. The dislike Tibbets and he had exchanged in their looks (January was acutely aware of looks) had been real and strong. Tibbets had understood that January's record of pin-point accuracy in the runs over the Salton Sea had been a way of showing contempt, a way of saying *you can't get rid of me even though you hate me and I hate you*. The record had forced Tibbets to keep January on one of the four second-string teams, but with the fuss they were making over the gimmick January had figured that would be far enough down the ladder to keep him out of things.

Now he wasn't so sure. Tibbets was dead. He lit another cigarette, found his hand shaking. The Camel tasted bitter. He threw it over the fence at a receding armband, and regretted it instantly. A waste. He went back inside.

Before climbing onto his bunk he got a paperback out of his footlocker. "Hey Professor, what you reading now?" Fitch said, grinning.

January showed him the blue cover. *Winter's Tale*, by an Isak Dinesen. Fitch examined the little

wartime edition. "Pretty racy, eh?"

"You bet," January said heavily. "This guy puts sex on every page." He climbed onto his bunk, opened the book. The stories were strange, hard to follow. The voices below bothered him. He concentrated harder.

As a boy on the farm in Arkansas, January had read everything he could lay his hands on. On Saturday afternoons he would race his father down the muddy lane to the mailbox (his father was a reader too), grab the *Saturday Evening Post* and run off to devour every word of it. That meant he had another week with nothing new to read, but he couldn't help it. His favorites were the Homblower stories, but anything would do. It was a way off the farm, a way into the world.

He had become a man who could slip between the covers of a book whenever he chose. But not on this night.

The next day the chaplain gave a memorial service, and on the morning after that Colonel Scholes looked in the door of their hut right after mess. "Briefing at eleven," he announced. His face was haggard. "Be there early." He looked at Fitch with bloodshot eyes, crooked a finger. "Fitch, January, Matthews—come with me."

January put on his shoes. The rest of the men sat on their bunks and watched them wordlessly. January followed Fitch and Matthews out of the hut.

"I've spent most of the night on the radio with General Le May," Scholes said. He looked them each in the eye. "We've decided you're to be the first crew to make a strike."

Fitch was nodding, as if he had expected it.

"Think you can do it?" Scholes said.

"Of course," Fitch replied. Watching him January understood why they had chosen him to replace Tibbets: Fitch was like the old bull, he had that same ruthlessness. The young bull.

"Yes, sir," Matthews said.

Scholes was looking at him. "Sure," January said, not wanting to think about it. "Sure." His heart was pounding directly on his sternum. But Fitch and Matthews looked serious as owls, so he wasn't going to stick out by looking odd. It was big news, after all; anyone would be taken aback by it. Nevertheless, January made an effort to nod.

"Okay," Scholes said. "McDonald will be flying with you as co-pilot." Fitch frowned. "I've got to go tell those British officers that Le May doesn't want them on the strike with you. See you at the briefing."

"Yes, sir."

As soon as Scholes was around the corner Fitch swung a fist at the sky. "Yow!" Matthews cried. He and Fitch shook hands. "We did it!" Matthews took January's hand and wrung it, his face plastered with a goofy grin. "We did it!"

"Somebody did it, anyway," January said.

"Ah, Frank," Matthews said. "Show some spunk. You're always so cool."

"Old Professor Stoneface," Fitch said, glancing at January with a trace of amused contempt. "Come on, let's get to the briefing."

The briefing hut, one of the longer Quonsets, was completely surrounded by MPs holding carbines. "Gosh," Matthews said, subdued by the sight. Inside it was already smoky. The walls were covered by the usual maps of Japan. Two blackboards at the front were draped with sheets. Captain Shepard, the naval officer who worked with the scientists on the gimmick, was in back with his assistant Lieutenant Stone, winding a reel of film onto a projector. Dr. Nelson, the group psychiatrist, was already seated on

a front bench near the wall. Tibbets had recently sicced the psychiatrist on the group— another one of his great ideas, like the spies in the bar. The man's questions had struck January as stupid. He hadn't even been able to figure out that Easterly was a flake, something that was clear to anybody who flew with him, or even played him in a single round of poker. January slid onto a bench beside his mates.

The two Brits entered, looking furious in their stiff-upper-lip way. They sat on the bench behind January. Sweeney's and Easterly's crews filed in, followed by the other men, and soon the room was full. Fitch and the rest pulled out Lucky Strikes and lit up; since they had named the plane only January had stuck with Camels.

Scholes came in with several men January didn't recognize, and went to the front. The chatter died, and all the smoke plumes ribboned steadily into the air.

Scholes nodded, and two intelligence officers took the sheets off the blackboards, revealing aerial reconnaissance photos.

"Men," Scholes said, "These are the target cities."

Someone cleared his throat.

"In order of priority they are Hiroshima, Kokura, and Nagasaki. There will be three weather scouts: *Straight Flush* to Hiroshima, *Strange Cargo* to Kokura, and *Full House* to Nagasaki. *The Great Artiste* and *Number 91* will be accompanying the mission to take photos. And *Lucky Strike* will fly the bomb."

There were rustles, coughs. Men turned to look at January and his mates, and they all sat up straight. Sweeney stretched back to shake Fitch's hand, and there were some quick laughs. Fitch grinned.

"Now listen up," Scholes went on. "The weapon we are going to deliver was successfully tested stateside a couple weeks ago. And now we've got orders to drop it on the enemy." He paused to let that sink in. "I'll let Captain Shepard tell you more."

Shepard walked to the blackboard slowly, savoring his entrance. His forehead was shiny with sweat, and January realized he was excited or nervous. He wondered what the shrink would make of that.

"I'm going to come right to the point," Shepard said. "The bomb you are going to drop is something new in history. We think it will knock out everything within four miles."

Now the room was completely still. January noticed that he could see a great deal of his nose, eyebrows, and cheeks; it was as if he were receding back into his body, like a fox into its hole. He kept his gaze rigidly on Shepard, steadfastly ignoring the feeling. Shepard pulled a sheet back over a blackboard while someone else turned down the lights.

"This is a film of the only test we have made," Shepard said. The film started, caught, started again. A wavery cone of bright cigarette smoke speared the length of the room, and on the sheet sprang a dead gray landscape: a lot of sky, a smooth desert floor, hills in the distance. The projector went *click-click-click-click, click-click-click-click*. "The bomb is on the top of the tower," Shepard said, and January focused on the pinlike object sticking out of the desert floor, off against the hills. It was between eight and ten miles from the camera, he judged; he had gotten good at calculating distances. He was still distracted by his face.

*Click-click-click-click, click*—then the screen went white for a second, filling even their room with light. When the picture returned the desert floor was filled with a white bloom of fire. The fireball coalesced and then quite suddenly it leaped off the earth all the way into the *stratosphere*, by God, like a tracer bullet leaving a machine-gun, trailing a whitish pillar of smoke behind it. The pillar gushed up and a growing ball of smoke billowed outward, capping the pillar. January calculated the size of the cloud, but he was sure he got it wrong. There it stood. The picture flickered, and then the screen went white again, as if the camera had melted or that part of the world had come apart. But the flapping from the projector



told them it was the end of the film.

January felt the air suck in and out of his open mouth. The lights came on in the smoky room and for a second he panicked, he struggled to shove his features into an accepted pattern, the shrink would be looking around at them all—and then he glanced around and realized he needn't have worried, that he wasn't alone. Faces were bloodless, eyes were blinky or bug-eyed with shock, mouths hung open or were clamped whitely shut. For a few moments they all had to acknowledge what they were doing. January, scaring himself, felt an urge to say, "Play it again, will you?" Fitch was pulling his curled black hair off his thug's forehead uneasily. Beyond him January saw that one of the Limeys had already reconsid-ered how mad he was about missing the flight. Now he looked sick. Someone let out a long *whew*, another whistled. January looked to the front again, where the shrink watched them, undisturbed.

Shepard said, "It's big, all right. And no one knows what will happen when it's dropped from the air. But the mush-room cloud you saw will go to at least thirty thousand feet, probably sixty. And the flash you saw at the beginning was hotter than the sun."

Hotter than the sun. More licked lips, hard swallows, readjusted baseball caps. One of the intelligence officers passed out tinted goggles like welder's glasses. January took his and twiddled the opacity dial.

Scholes said, "You're the hottest thing in the armed forces, now. So no talking, even among yourselves." He took a deep breath. "Let's do it the way Colonel Tibbets would have wanted us to. He picked every one of you because you were the best, and now's the time to show he was right. So—so let's make the old man proud."

The briefing was over. Men filed out into the sudden sunlight. Into the heat and glare. Captain Shepard approached Fitch. "Stone and I will be flying with you to take care of the bomb," he said.

Fitch nodded. "Do you know how many strikes we'll fly?"

"As many as it takes to make them quit." Shepard stared hard at all of them. "But it will only take one."

War breeds strange dreams. That night January writhed over his sheets in the hot wet vegetable darkness, in that frightening half-sleep when you sometimes know you are dreaming but can do nothing about it, and he dreamed he was walking...

*... walking through the streets when suddenly the sun swoops down, the sun touches down and everything is in-stantly darkness and smoke and silence, a deaf roaring. Walls of fire. His head hurts and in the middle of his vision is a bluewhite blur as if God's camera went off in his face. Ah—the sun fell, hv thinks. His arm is burned. Blinking is painful. People stumbling by, mouths open, horribly burned—*

*He is a priest, he can feel the clerical collar, and the wounded ask him for help. He points to his ears, tries to touch them but can't. Pall of black smoke over everything, the city has fallen into the streets. Ah, it's the end of the world. In a park he finds shade and cleared ground. People crouch under bushes like frightened animals. Where the park meets the river red and black figures crowd into steaming water. A figure gestures from a copse of bamboo. He enters it, finds five or six faceless soldiers huddling. Their eyes have melted, their mouths are holes. Deafness spares him their words. The sighted soldier mimes drinking. The soldiers are thirsty. He nods and goes to the river in search of a con-tainer. Bodies float downstream.*

*Hours pass as he hunts fruitlessly for a bucket. He pulls people from the rubble. He hears a bird screeching and he realizes that his deafness is the roar of the city burning, a roar like the blood in his ears but he is not deaf he only thought he was deaf because there are no human cries. The people are suffering in silence. Through the dusky night he stumbles back to the river, pain crashing through his head. In a field men are pulling potatoes out of the ground that have been*

*baked well enough to eat. He shares one with them. At the river everyone is dead—*

—and he struggled out of the nightmare drenched in rank sweat, the taste of dirt in his mouth, his stomach knotted with horror. He sat up and the wet rough sheet clung to his skin. His heart felt crushed between lungs desperate for air. The flowery rotting jungle smell filled him and images from the dream flashed before him so vividly that in the dim hut he saw nothing else. He grabbed his cigarettes and jumped off the bunk, hurried out into the compound. Trembling he lit up, started pacing around. For a moment he worried that the idiot psychiatrist might see him, but then he dismissed the idea. Nelson would be asleep. They were all asleep. He shook his head, looked down at his right arm and almost dropped his cigarette—but it was just his stove scar, an old scar, he'd had it most of his life, since the day he'd pulled the frypan off the stove and onto his arm, burning it with oil. He could still remember the round O of fear that his mother's mouth had made as she rushed into see what was wrong. Just an old burn scar, he thought, let's not go overboard here. He pulled his sleeve down.

For the rest of the night he tried to walk it off, cigarette after cigarette. The dome of the sky lightened until all the compound and the jungle beyond it was visible. He was forced by the light of day to walk back into his hut and lie down as if nothing had happened.

Two days later Scholes ordered them to take one of Le May's men over Rota for a test run. This new lieutenant colonel ordered Fitch not to play with the engines on takeoff. They flew a perfect run, January put the dummy gimmick right on the aiming point just as he had so often in the Salton Sea; and Fitch powered the plane down into the violent bank that started their 150-degree turn and flight for safety. Back on Tinian the lieutenant colonel congratulated them and shook each of their hands. January smiled with the rest, palms cool, heart steady. It was as if his body were a shell, something he could manipulate from without, like a bombsight. He ate well, he chatted as much as he ever had, and when the psychiatrist ran him to earth for some questions he was friendly and seemed open.

"Hello, doc."

"How do you feel about all this, Frank?"

"Just like I always have, sir. Fine."

"Eating well?"

"Better than ever."

"Sleeping well?"

"As well as I can in this humidity. I got used to Utah, I'm afraid." Dr. Nelson laughed. Actually January had hardly slept since his dream. He was afraid of sleep. Couldn't the man see that?

' 'And how do you feel about being part of the crew chosen to make the first strike?"

"Well, it was the right choice, I reckon. We're the b—the best crew left."

"Do you feel sorry about Tibbets' crew's accident?"

"Yes sir, I do." You better believe it.

After the jokes and firm handshakes that ended the inter-view January walked out into the blaze of the tropical noon and lit a cigarette. He allowed himself to feel how much he despised the psychiatrist and his blind profession at the same time he was waving good-bye to the man. Ounce brain. Why couldn't he have seen? Whatever happened it would be his fault... With a rush of smoke out of him January realized how painfully easy it was to fool someone if you wanted to. All action was no more than a mask that could be perfectly manipulated from somewhere else. And all the while in that somewhere else January lived in a *click-click-click* of film, in the silent roaring of a dream, struggling against images he couldn't dispel. The heat of the tropical sun—ninety-three million miles away, wasn't it?—pulsed painfully on the back of his neck.

As he watched the psychiatrist collar their tail-gunner Kochenski, he thought of walking up to the man and saying / *quit*. I don't want to do this. In imagination he saw the look that would form in the man's eye, in Fitch's eye, in Tibbets's eye, and his mind recoiled from the idea. He felt too much contempt for them. He wouldn't for anything give them a means to despise him, a reason to call him coward. Stub-bornly he banished the whole complex of thought. Easier to go along with it.

And so a couple of disjointed days later, just after midnight of August 9th, he found himself preparing for the strike. Around him Fitch and Matthews and Haddock were doing the same. How odd were the everyday motions of getting dressed when you were off to demolish a city, to end a hundred thousand lives! January found himself examining his hands, his boots, the cracks in the linoleum. He put on his survival vest, checked the pockets abstractedly for fish-hooks, water kit, first aid package, emergency rations. Then the parachute harness, and his coveralls over it all. Tying his bootlaces took minutes; he couldn't do it when watching his fingers so closely.

"Come on, Professor!" Fitch's voice was tight. "The big day is here."

He followed the others into the night. A cool wind was blowing. The chaplain said a prayer for them. They took jeeps down Broadway to runway Able. *Lucky Strike* stood in a circle of spotlights and men, half of them with cameras, the rest with reporters' pads. They surrounded the crew; it re-minded January of a Hollywood premiere. Eventually he escaped up the hatch and into the plane. Others followed. Half an hour passed before Fitch joined them, grinning like a movie star. They started the engines, and January was thank-ful for their vibrating, thought-smothering roar. They taxied away from the Hollywood scene and January felt relief for a moment, until he remembered where they were going. On runway Able the engines pitched up to their twenty-three hundred rpm whine, and looking out the clear windscreen he saw the runway paintmarks move by even faster. Fitch kept them on the runway till Tinian had run out from under them, then quickly pulled up. They were on their way.

When they got to altitude January climbed past Fitch and McDonald to the bombardier's seat and placed his parachute on it. He leaned back. The roar of the four engines packed around him like cotton batting. He was on the flight, nothing to be done about it now. The heavy vibration was a comfort, he liked the feel of it there in the nose of the plane. A drowsy, sad acceptance hummed through him.

Against his closed eyelids flashed a black eyeless face and he jerked awake, heart racing. He was on the flight, no way out. Now he realized how easy it would have been to get out of it. He could have just said he didn't want to. The simplic-ity of it appalled him. Who gave a damn what the psychiatrist or Tibbets or anyone else thought, compared to this? Now there was no way out. It was a comfort, in a way. Now he could stop worrying, stop thinking he had any choice.

Sitting there with his knees bracketing the bombsight Janu-ary dozed, and as he dozed he daydreamed his way out. He could climb the step to Fitch and McDonald and declare he had been secretly promoted to major and ordered to redirect the mission. They were to go to Tokyo and drop the bomb in the bay. The Jap war cabinet had been told to watch this demonstration of the new weapon, and when they saw that fireball boil the bay and bounce into heaven they'd run and sign surrender papers as fast as they could write, kamikazes or not. They weren't crazy, after all. No need to murder a whole city. It was such a good plan that the generals back home were no doubt changing the mission at this very minute, desperately radioing their instructions to Tinian, only to find out it was too late... so that when they returned to Tinian January would become a hero for guessing what the generals really wanted, and for risking all to do it. It would be like one of the Hornblower stories in the *Saturday Evening Post*.

Once again January jerked awake. The drowsy pleasure of the fantasy was replaced with desperate scorn. There wasn't a chance in hell that he could convince Fitch and the rest that he had secret orders superceding theirs. And he couldn't go up there and wave his pistol around and *order* them to drop the bomb in Tokyo Bay, because he was the one who had to actually drop it, and he couldn't be down in front dropping the bomb and up ordering the others around at the same time. Pipe dreams.

Time swept on, slow as a second hand. January's thoughts, however, matched the spin of the props; desperately they cast about, now this way now that, like an animal caught by the leg in a trap. The crew was silent. The clouds below were a white scree on the black ocean. January's knee vibrated against the squat stand of the bombsight. He was the one who had to drop the bomb. No matter where his thoughts lunged they were brought up short by that. He was the one, not Fitch or the crew, not Le May, not the generals and scientists back home, not Truman and his advisors. Truman—suddenly January hated him. Roosevelt would have done it differently. If only Roosevelt had lived! The grief that had filled January when he learned of Roosevelt's death reverberated through him again more strongly than ever. It was unfair to have worked so hard and then not see the war's end. And FDR would have ended it differently. Back at the start of it all he had declared that civilian centers were never to be bombed, and if he had lived, if, if, if. But he hadn't. And now it was smiling bastard Harry Truman, ordering *him*, Frank January, to drop the sun on two hundred thousand women and children. Once his father had taken him to see the Browns play before twenty thousand, a giant crowd—"I never voted for you," January whispered viciously, and jerked to realize he had spoken aloud. Luckily his microphone was off. And Roosevelt would have done it differently—he *would have*.

The bombsight rose before him, spearing the black sky and blocking some of the hundreds of little cruciform stars. *Lucky Strike* ground on toward Iwo Jima, minute by minute flying four miles closer to their target. January leaned forward and put his face in the cool headrest of the bombsight, hoping that its grasp might hold his thoughts as well as his forehead. It worked surprisingly well.

His earphones crackled and he sat up. "Captain January." It was Shepard. "We're going to arm the bomb now, want to watch?"

"Sure thing." He shook his head, surprised at his own duplicity. Stepping up between the pilots, he moved stiffly to the roomy cabin behind the cockpit. Matthews was at his desk taking a navigational fix on the radio signals from Iwo Jima and Okinawa, and Haddock stood beside him. At the back of the compartment was a small circular hatch, below the larger tunnel leading to the rear of the plane. January opened it, sat down and swung himself feet first through the hole.

The bomb bay was unheated, and the cold air felt good. He stood facing the bomb. Stone was sitting on the floor of the bay; Shepard was laid out under the bomb, reaching into it. On a rubber pad next to Stone were tools, plates, several cylindrical blocks. Shepard pulled back, sat up, sucked a scraped knuckle. He shook his head ruefully: "I don't dare wear gloves with this one."

"I'd be just as happy myself if you didn't let something slip," January joked nervously. The two men laughed,

"Nothing can blow till I change those green wires to the red ones," Stone said.

"Give me the wrench," Shepard said. Stone handed it to him, and he stretched under the bomb again. After some awkward wrenching inside it he lifted out a cylindrical plug. "Breech plug," he said, and set it on the mat.

January found his skin goose-pimpling in the cold air. Stone handed Shepard one of the blocks. Shepard extended under the bomb again. "Red ends toward the breech."

"I know." Watching them January was reminded of auto mechanics on the oily floor of a garage, working under a car. He had spent a few years doing that himself, after his family moved to Vicksburg. Hiroshima was a river town. One time a flatbed truck carrying bags of cement powder down Fourth Street hill had lost its brakes and careened into the intersection with River Road, where despite the driver's efforts to turn it smashed into a passing car. Frank had been out in the yard playing, had heard the crash and saw the cement dust rising. He had been one of the first there. The woman and child in the passenger seat of the Model T had been killed. The woman driving was okay. They were from Chicago. A group of folks subdued the driver of the truck, who kept trying to help at the Model T, though he had

a bad cut on his head and was covered with white dust.

"Okay, let's tighten the breech plug." Stone gave Shepard the wrench. "Sixteen turns exactly," Shepard said. He was sweating even in the bay's chill, and he paused to wipe his forehead. "Let's hope we don't get hit by lightning." He put the wrench down and shifted onto his knees, picked up a circular plate. Hubcap. January thought. Stone connected wires, then helped Shepard install two more plates. Good old American know-how, January thought, goose-pimples rip-pling across his skin like cat's-paws over water. There was Shepard, a scientist, putting together a bomb like he was an auto mechanic changing oil and plugs. January felt a tight rush of rage at the scientists who had designed the bomb. They had worked on it for over a year down there in New Mexico, had none of them in all that time ever stopped to think what they were doing?

But none of them had to drop it. January turned to hide his face from Shepard, stepped down the bay. The bomb looked like a big long trashcan, with fins at one end and little antennae at the other. Just a bomb, he thought, damn it, it's just another bomb.

Shepard stood and patted the bomb gently. "We've got a live one now." Never a thought about what it would do. January hurried by the man, afraid that hatred would crack his shell and give him away. The pistol strapped to his belt caught on the hatchway and he imagined shooting Shepard— shooting Fitch and McDonald and plunging the controls for-ward so that *Lucky Strike* tilted and spun down into the sea like a spent tracer bullet, like a plane broken by flak, follow-ing the arc of all human ambition. Nobody would ever know what had happened to them, and their trashcan would be dumped to the bottom of the Pacific where it belonged. He could even shoot everyone and parachute out, and perhaps be rescued by one of the Superdumbos following them...

The thought passed and remembering it January squinted with disgust. But another part of him agreed that it was a possibility. It could be done. It would solve his problem. His fingers explored the snap on his holster.

"Want some coffee?" Matthews asked.

"Sure," January said, and took his hand from the gun to reach for the cup. He sipped: hot. He watched Matthews and Benton tune the loran equipment. As the beeps came in Matthews took a straightedge and drew lines from Okinawa and Iwo Jima on his map table. He tapped a finger on the intersection. "They've taken the art out of navigation," he said to January. "They might as well stop making the naviga-tor's dome," thumbing up at the little Plexiglas bubble over them.

"Good old American know-how," January said.

Matthews nodded. With two fingers he measured the dis-tance between their position and Iwo Jima. Benton measured with a ruler.

"Rendezvous at five thirty-five, eh?" Matthews said. They were to rendezvous with the two trailing planes over Iwo.

Benton disagreed. "I'd say five fifty."

"What? Check again, guy, we're not in no tugboat here."

"The wind—"

"Yah, the wind. Frank, you want to add a bet to the pool?"

"Five thirty-six," January said promptly.

They laughed. "See, he's got more confidence in me," Matthews said with a dopey grin.

January recalled his plan to shoot the crew and tip the plane into the sea, and he pursed his lips, repelled. Not for anything would he be able to shoot these men, who, if not friends, were at least

companions. They passed for friends. They meant no harm.

Shepard and Stone climbed into the cabin. Matthews offered them coffee. "The gimmick's ready to kick their ass, eh?" Shepard nodded and drank.

January moved forward, past Haddock's console. Another plan that wouldn't work. What to do? All the flight engineer's dials and gauges showed conditions were normal. Maybe he could sabotage something? Cut a line somewhere?

Fitch looked back at him and said, "When are we due over Iwo?"

"Five forty, Matthews says."

"He better be right."

A thug. In peacetime Fitch would be hanging around a pool table giving the cops trouble. He was perfect for war. Tibbets had chosen his men well—most of them, anyway. Moving back past Haddock January stopped to stare at the group of men in the navigation cabin. They joked, drank coffee. They were all a bit like Fitch: young toughs, capable and thought-less. They were having a good time, an adventure. That was January's dominant impression of his companions in the 509th; despite all the bitching and the occasional moments of over-mastering fear, they were having a good time. His mind spun forward and he saw what these young men would grow up to be like as clearly as if they stood before him in businessmen's suits, prosperous and balding. They would be tough and capable and thoughtless, and as the years passed and the great war receded in time they would look back on it with ever-increasing nostalgia, for they would be the survivors and not the dead. Every year of this war would feel like ten in their memories, so that the war would always remain the central experience of their lives—a time when history lay palpable in their hands, when each of their daily acts affected it, when moral issues were simple, and others told them what to do—so that as more years passed and the survivors aged, bodies falling apart, lives in one rut or another, they would unconsciously push harder and harder to thrust the world into war again, thinking somewhere inside themselves that if they could only return to world war then they would magically be again as they were in the last one—young, and free, and happy. And by that time they would hold the positions of power, they would be capable of doing it.

So there would be more wars, January saw. He heard it in Matthews's laughter, saw it in their excited eyes. "There's Iwo, and it's five thirty-one. Pay up! I win!" And in future wars they'd have more bombs like the gimmick, hundreds of them no doubt. He saw more planes, more young crews like this one, flying to Moscow no doubt or to wherever, fireballs in every capital, why not? And to what end? To what end? So that the old men could hope to become magically young again. Nothing more sane than that.

They were over Iwo Jima. Three more hours to Japan. Voices from *The Great Artiste* and *Number 91* crackled on the radio. Rendezvous accomplished, the three planes flew northwest, toward Shikoku, the first Japanese island in their path. January went aft to use the toilet. "You okay, Frank?" Matthews asked. "Sure. Terrible coffee, though."

"Ain't it always." January tugged at his baseball cap and hurried away. Kochenski and the other gunners were playing poker. When he was done he returned forward. Matthews sat on the stool before his maps, reading his equipment for the constant monitoring of drift that would now be required. Haddock and Benton were also busy at their stations. January maneuvered between the pilots down into the nose. "Good shooting," Matthews called after him.

Forward it seemed quieter. January got settled, put his head-phones on and leaned forward to look out the ribbed Plexiglas.

Dawn had turned the whole vault of the sky pink. Slowly the radiant shade shifted through lavender to blue, pulse by pulse, a different color. The ocean below was a glittering blue plane, marbled by a pattern of puffy pink cloud. The sky above was a vast dome, darker above than on the horizon. January had always thought that dawn was the time when you could see most clearly how big the earth was, and how

high above it they flew. It seemed they flew at the very upper edge of the atmosphere, and January saw how thin it was, how it was just a skin of air really, so that even if you flew up to its top the earth still extended away infinitely in every direction. The coffee had warmed January, he was sweating. Sunlight blinked off the Plexiglas. His watch said six. Plane and hemisphere of blue were split down the middle by the bomb-sight. His earphones crackled and he listened in to the reports from the lead planes flying over the target cities. Kokura, Nagasaki, Hiroshima, all of them had six-tenths cloud cover. Maybe they would have to cancel the whole mission because of weather. "We'll look at Hiroshima first." Fitch said. January peered down at the fields of miniature clouds with renewed interest. His parachute slipped under him. Readjusting it he imagined putting it on, sneaking back to the central escape hatch under the navigator's cabin, opening the hatch... he could be out of the plane and gone before anyone noticed. Leave it up to them. They could bomb or not but it wouldn't be January's doing. He could float down onto the world like a puff of dandelion, feel cool air rush around him, watch the silk canopy dome hang over him like a miniature sky, a private world.

An eyeless black face. January shuddered; it was as though the nightmare could return any time. If he jumped nothing would change, the bomb would still fall—would he feel any better, floating on his Inland Sea? Sure, one part of him shouted; maybe, another conceded; the rest of him saw that face...

Earphones crackled. Shepard said, "Lieutenant Stone has now armed the bomb, and I can now tell you all what we are carrying. Aboard with us is the world's first atomic bomb."

Not exactly, January thought. Whistles squeaked in his earphones. The first one went off in New Mexico. Splitting atoms: January had heard the term before. Tremendous energy in every atom, Einstein had said. Break one, and—he had seen the result on film. Shepard was talking about radiation, which brought back more to January. Energy released in the form of X-rays. Killed by X-rays! It would be against the Geneva Convention if they had thought of it.

Fitch cut in. "When the bomb is dropped Lieutenant Benton will record our reaction to what we see. This recording is being made for history, so watch your language." Watch your language! January choked back a laugh. Don't curse or blaspheme God at the sight of the first atomic bomb incinerating a city and all its inhabitants with X-rays!

Six twenty. January found his hands clenched together on the headrest of the bombsight. He felt as if he had a fever. In the harsh wash of morning light the skin on the backs of his hands appeared slightly translucent. The whorls in the skin looked like the delicate patterning of waves on the sea's surface. His hands were made of atoms. Atoms were the smallest building blocks of matter, it took billions of them to make those tense, trembling hands. Split one atom and you had the fireball. That meant that the energy contained in even one hand... he turned up a palm to look at the lines and the mottled flesh under the transparent skin. A person was a bomb that could blow up the world. January felt that latent power stir in him, pulsing with every hard heart-knock. What beings they were, and in what a blue expanse of a world! —And here they spun on to drop a bomb and kill a hundred thousand of these astonishing beings.

When a fox or a raccoon is caught by the leg in a trap, it lunges until the leg is frayed, twisted, perhaps broken, and only then does the animal's pain and exhaustion force it to quit. Now in the same way January wanted to quit. His mind hurt. His plans to escape were so much crap—stupid, useless. Better to quit. He tried to stop thinking, but it was hopeless. How could he stop? As long as he was conscious he would be thinking. The mind struggles longer in its traps than any fox.

*Lucky Strike* tilted up and began the long climb to bombing altitude. On the horizon the clouds lay over a green island. Japan. Surely it had gotten hotter, the heater must be broken, he thought. Don't think. Every few minutes Matthew gave Fitch small course adjustments. "Two seventy-five, now. That's it." To escape the moment January recalled his childhood. Following a mule and plow. Moving to Vicksburg (rivers). For a while there in Vicksburg, since his stutter made it hard to gain friends, he had played a game with himself. He had passed the time by imagining that everything he did was vitally

important and determined the fate of the world. If he crossed a road in front of a certain car, for instance, then the car wouldn't make it through the next intersection before a truck hit it, and so the man driving would be killed and wouldn't be able to invent the flying boat that would save President Wilson from kidnappers—so he had to wait for that car because everything afterward depended on it, oh damn it, he thought, damn it, think of something *different*. The last Hornblower story he had read—how would *he* get out of this? The round O of his mother's face as she ran in and saw his arm— The Mississippi, mud-brown behind its levees— Abruptly he shook his head, face twisted in frustration and despair, aware at last that no possible avenue of memory would serve as an escape for him now, for now there was no part of his life that did not apply to the situation he was in, and no matter where he cast his mind it was going to shore up against the hour facing him.

Less than an hour. They were at thirty thousand feet, bombing altitude. Fitch gave him altimeter readings to dial into the bombsight, Matthews gave him windspeeds. Sweat got in his eye and he blinked furiously. The sun rose behind them like an atomic bomb, glinting off every corner and edge of the Plexiglas, illuminating his bubble compartment with a fierce glare. Broken plans jumbled together in his mind, his breath was short, his throat dry. Uselessly and repeatedly he damned the scientists, damned Truman. Damned the Japanese for causing the whole mess in the first place, damned yellow killers, they had brought this on themselves. Remember Pearl. American men had died under bombs when no war had been declared; they had started it and now it was coming back to them with a vengeance. And they deserved it. And an invasion of Japan would take years, cost millions of lives—end it now, end it they deserved it, they deserved it steaming river full of charcoal people silently dying damned stubborn race of maniacs!

"There's Honshu," Fitch said, and January returned to the world of the plane. They were over the Inland Sea. Soon they would pass the secondary target Kokura, a bit to the south. Seven thirty. The island was draped more heavily than the sea by clouds, and again January's heart leaped with the idea that weather would cancel the mission. But they did deserve it. It was a mission like any other mission. He had dropped bombs on Africa, Sicily, Italy, all Germany. . . He leaned forward to take a look through the sight. Under the X of the crosshairs was the sea, but at the lead edge of the sight was land. Honshu. At two hundred and thirty miles an hour that gave them about a half hour to Hiroshima. Maybe less. He wondered if his heart could beat so hard for that long.

Fitch said, "Matthews, I'm giving over guidance to you. Just tell us what to do."

"Bear south two degrees," was all Matthews said. At last their voices had taken on a touch of awareness, even fear.

"January, are you ready?" Fitch asked.

"I'm just waiting," January said. He sat up, so Fitch could see the back of his head. The bombsight stood between his legs. A switch on its side would start the bombing sequence; the bomb would not leave the plane immediately upon the flick of the switch, but would drop after a fifteen-second radio tone warned the following planes. The sight was ad-justed accordingly.

"Adjust to a heading of two sixty-five," Matthews said. "We're coming in directly upwind." This was to make any side-drift adjustments for the bomb unnecessary. "January, dial it down to two hundred and thirty-one miles per hour."

"Two thirty-one."

Fitch said, "Everyone but January and Matthews, get your goggles on."

January took the darkened goggles from the floor. One needed to protect one's eyes or they might melt. He put them on, put his forehead on the headrest. They were in the way. He took them off. When he looked through the sight again there was land under the crosshairs. He checked his watch. Eight o'clock. Up and reading the papers, drinking tea.



"Ten minutes to AP," Matthews said. The aiming point was Aioi Bridge, a T-shaped bridge in the middle of the delta-straddling city. Easy to recognize.

"There's a lot of cloud down there," Fitch noted. "Are you going to be able to see?"

"I won't be sure until we try it," January said.

"We can make another pass and use radar if we need to," Matthews said.

Fitch said, "Don't drop it unless you're sure, January."

"Yes sir."

Through the sight a grouping of rooftops and gray roads was just visible between broken clouds. Around it green forest. "All right," Matthews exclaimed, "here we go! Keep it right on this heading, Captain! January, we'll stay at two thirty-one."

"And same heading," Fitch said. "January, she's all yours. Everyone make sure your goggles are on. And be ready for the turn."

January's world contracted to the view through the bomb-sight. A stippled field of cloud and forest. Over a small range of hills and into Hiroshima's watershed. The broad river was mud brown, the land pale hazy green, the growing network of roads flat gray. Now the tiny rectangular shapes of buildings covered almost all the land, and swimming into the sight came the city proper, narrow islands thrusting into a dark blue bay. Under the crosshairs the city moved island by island, cloud by cloud. January had stopped breathing, his fingers were rigid as stone on the switch. And there was Aioi Bridge. It slid right under the crosshairs, a tiny T right in a gap in the clouds. January's fingers crushed the switch. Deliberately he took a breath, held it. Clouds swam under the crosshairs, then the next island. "Almost there," he said calmly into his microphone. "Steady." Now that he was committed his heart was humming like the Wrights. He counted to ten. Now flowing under the crosshairs were clouds alternating with green forest, leaden roads. "I've turned the switch, but I'm not getting a tone!" he croaked into the mike. His right hand held the switch firmly in place. Fitch was shouting something—

Matthews's voice cracked across it—"Flipping it b-back and forth," January shouted, shielding the bombsight with his body from the eyes of the pilots. "But *still*—wait a second—"

He pushed the switch down. A low hum filled his ears. "That's it! It started!"

"But where will it land?" Matthews cried.

"Hold steady!" January shouted.

*Lucky Strike* shuddered and lofted up ten or twenty feet. January twisted to look down and there was the bomb, flying just below the plane. Then with a wobble it fell away.

The plane banked right and dove so hard that the centrifugal force threw January against the Plexiglas. Several thousand feet lower Fitch leveled it out and they hurtled north;

"Do you see anything?" Fitch cried.

From the tailgun Kochenski gasped, "Nothing." January struggled upright. He reached for the welder's goggles, but they were no longer on his head. He couldn't find them. "How long has it been?" he said.

"Thirty seconds," Matthews replied.

January clamped his eyes shut.

The blood in his eyelids lit up red, then white.

On the earphones a clutter of voices: "Oh my God. Oh my God." The plane bounced and tumbled, metallicly shrieking. January pressed himself off the Plexiglas. "Nother Shockwave!" Kochenski

yelled. The plane rocked again, bounced out of control, this is it, January thought, end of the world, I guess that solves my problem.

He opened his eyes and found he could still see. The engines still roared, the props spun. "Those were the Shockwaves from the bomb," Fitch called. "We're okay now. Look at that! Will you look at that sonofabitch go!"

January looked. The cloud layer below had burst apart, and a black column of smoke billowed up from a core of red fire. Already the top of the column was at their height. Exclamations of shock clattered painfully in January's ears. He stared at the fiery base of the cloud, at the scores of fires feeding into it. Suddenly he could see past the cloud, and his finger-nails cut into his palms. Through a gap in the clouds he saw it clearly, the delta, the six rivers, there off to the left of the tower of smoke: the city of Hiroshima, untouched.

"We missed!" Kochenski yelled. "We missed it!"

January turned to hide his face from the pilots; on it was a grin like a rictus. He sat back in his seat and let the relief fill him.

Then it was back to it. "God damn it!" Fitch shouted down at him. McDonald was trying to restrain him. "Janu-ary, get up here!"

"Yes sir." Now there was a new set of problems.

January stood and turned, legs weak. His right fingertips throbbed painfully. The men were crowded forward to look out the Plexiglas. January looked with them.

The mushroom cloud was forming. It roiled out as if it might continue to extend forever, fed by the inferno and the black stalk below it. It looked about two miles wide, and half a mile tall, and it extended well above the height they flew at, dwarfing their plane entirely. "Do you think we'll all be sterile?" Matthews said.

"I can taste the radiation," McDonald declared. "Can you? It tastes like lead."

Bursts of flame shot up into the cloud from below, giving a purplish tint to the stalk. There it stood: lifelike, malignant, sixty thousand feet tall. One bomb. January shoved past the pilots into the navigation cabin, overwhelmed.

"Should I start recording everyone's reactions, Captain?" asked Benton.

"To hell with that," Fitch said, following January back. But Shepard got there first, descending quickly from the navigation dome. He rushed across the cabin, caught January on the shoulder, "You bastard!" he screamed as January stumbled back. "You lost your nerve, coward!"

January went for Shepard, happy to have a target at last, but Fitch cut in and grabbed him by the collar, pulled him around until they were face to face—

"Is that right?" Fitch cried, as angry as Shepard. "Did you screw up on purpose?"

"No," January grunted, and knocked Fitch's hands away from his neck. He swung and smacked Fitch on the mouth, caught him solid. Fitch staggered back, recovered, and no doubt would have beaten January up, but Matthews and Benton and Stone leaped in and held him back, shouting for order. "Shut up! Shut up!" McDonald screamed from the cockpit, and for a moment it was bedlam, but Fitch let himself be restrained, and soon only McDonald's shouts for quiet were heard. January retreated to between the pilot seats, right hand on his pistol holster.

"The city was in the crosshairs when I flipped the switch," he said. "But the first couple of times I flipped it nothing happened—"

"That's a lie!" Shepard shouted. "There was nothing wrong with the switch, I checked it myself."

Besides the bomb exploded *miles* beyond Hiroshima, look for yourself! That's *minutes*.'" He wiped spit from his chin and pointed at Janu-ary. "You did it."

"You don't know that," January said. But he could see the men had been convinced by Shepard, and he took a step back. "You just get me to a board of inquiry, quick. And leave me alone till then. If you touch me again"—glaring venomously at Fitch and then Shepard—"I'll shoot you." He turned and hopped down to his seat, feeling exposed and vulnerable, like a treed raccoon.

"They'll shoot *you* for this," Shepard screamed after him. "Disobeying orders—treason—" Matthews and Stone were shutting him up.

"Let's get out of here," he heard McDonald say. "I can taste the lead, can't you?"

January looked out the Plexiglas. The giant cloud still burned and roiled. One atom... Well, they had really done it to that forest. He almost laughed but stopped himself, afraid of hysteria. Through a break in the clouds he got a clear view of Hiroshima for the first time. It lay spread over its islands like a map, unharmed. Well, that was that. The inferno at the base of the mushroom cloud was eight or ten miles around the shore of the bay, and a mile or two inland. A certain patch of forest would be gone, destroyed—utterly blasted from the face of the earth. The Japs would be able to go out and investigate the damage. And if they were told it was a demonstration, a warning—and if they acted fast—well, they had their chance. Maybe it would work.

The release of tension made January feel sick. Then he recalled Shepard's words and he knew that whether his plan worked or not he was still in trouble. In trouble! It was worse than that. Bitterly he cursed the Japartese, he even wished for a moment that he *had* dropped it on them. Wearily he let his despair empty him.

A long while later he sat up straight. Once again he was a trapped animal. He began lunging for escape, casting about for plans. One alternative after another. All during the long grim flight home he considered it, mind spinning at the speed of the props and beyond. And when they came down on Tinian he had a plan. It was a long shot, he reckoned, but it was the best he could do.

The briefing hut was surrounded by MPs again. January stumbled from the truck with the rest and walked inside. He was more than ever aware of the looks given him, and they were hard, accusatory. He was too tired to care. He hadn't slept in more than thirty-six hours, and had slept very little since the last time he had been in the hut, a week before. Now the room quivered with the lack of engine vibration to stabilize it, and the silence roared. It was all he could do to hold on to the bare essentials of his plan. The glares of Fitch and Shepard, the hurt incomprehension of Matthews, they had to be thrust out of his focus. Thankfully he lit a cigarette.

In a clamor of question and argument the others described the strike. Then the haggard Scholes and an intelligence officer led them through the bombing run. January's plan made it necessary to hold to his story: "... and when the AP was under the crosshairs I pushed down the switch, but got no signal. I flipped it up and down repeatedly until the tone kicked in. At that point there was still fifteen seconds to the release."

"Was there anything that may have caused the tone to start when it did?"

"Not that I noticed immediately, but—"

"It's impossible," Shepard interrupted, face red. "I checked the switch before we flew and there was nothing wrong with it. Besides, the drop occurred over a minute—"

"Captain Shepard," Scholes said. "We'll hear from you presently."

"But he's obviously lying—"

"Captain Shepard! It's not at all obvious. Don't speak unless questioned."

"Anyway," January said, hoping to shift the questions away from the issue of the long delay, "I noticed something about the bomb when it was falling that could explain why it stuck. I need to discuss it with one of the scientists familiar with the bomb's design."

"What was that?" Scholes asked suspiciously.

January hesitated. "There's going to be an inquiry, right?"

Scholes frowned. "This is the inquiry, Captain January. Tell us what you saw."

"But there will be some proceeding beyond this one?"

"It looks like there's going to be a court-martial, yes, Captain."

"That's what I thought. I don't want to talk to anyone but my counsel, and some scientist familiar with the bomb."

"I'm a scientist familiar with the bomb," Shepard burst out. "You could tell me if you really had anything, you—"

"I said I need a scientist!" January exclaimed, rising to face the scarlet Shepard across the table. "Not a G-God damned mechanic." Shepard started to shout, others joined in and the room rang with argument. While Scholes restored order January sat down, and he refused to be drawn out again.

"I'll see you're assigned counsel, and initiate the court-martial," Scholes said, clearly at a loss. "Meanwhile you are under arrest, on suspicion of disobeying orders in combat." January nodded, and Scholes gave him over to the MPs.

"One last thing," January said, fighting exhaustion. "Tell General Le May that if the Japs are told this drop was a warning, it might have the same effect as—"

"I told you!" Shepard shouted. "I told you he did it on purpose!"

Men around Shepard restrained him. But he had convinced most of them, and even Matthews stared at January with surprised anger.

January shook his head wearily. He had the dull feeling that his plan, while it had succeeded so far, was ultimately not a good one. "Just trying to make the best of it." It took all of his remaining will to force his legs to carry him in a dignified manner out of the hut.

His cell was an empty NCO's office. MPs brought his meals. For the first couple of days he did little but sleep. On the third day he glanced out the officer's barred window, and saw a tractor pulling a tarpaulin-draped trolley out of the compound, followed by jeeps filled with MPs. It looked like a military funeral. January rushed to the door and banged on it until one of the young MPs came.

"What's that they're doing out there?" January demanded. "Eyes cold and mouth twisted, the MP said, "They're mak-ing another strike. They're going to do it right this time."

"No!" January cried. "No!" He rushed the MP, who knocked him back and locked the door. "No!" He beat the door until his hands hurt, cursing wildly. "You don't *need* to do it, it isn't *necessary*." Shell shattered at last, he collapsed on the bed and wept. Now everything he had done would be rendered meaningless. He had sacrificed himself for nothing.

A day or two after that the MPs led in a colonel, an iron-haired man who stood stiffly and crushed January's hand when he shook it. His eyes were a pale, icy blue.

"I am Colonel Dray," he said. "I have been ordered to defend you at the court-martial." January could feel the dislike pouring from the man. "To do that I'm going to need every fact you have, so let's get started."

"I'm not talking to anybody until I've seen an atomic scientist."

"I am your *defense* counsel—"

"I don't care who you are," January said. "Your defense of me depends on you getting one of the scientists *here*. The higher up he is, the better. And I want to speak to him alone."

"I will have to be present."

So he would do it. But now January's counsel, too, was an enemy.

"Naturally," January said. "You're my counsel. But no one else. Our atomic secrecy may depend on it."

"You saw evidence of sabotage?"

"Not one word more until that scientist is here."

Angrily the colonel nodded and left.

Late the next day the colonel returned with another man. "This is Dr. Forest."

"I helped develop the bomb," Forest said. He had a crew cut and dressed in fatigues, and to January he looked more Army than the colonel. Suspiciously he stared back and forth at the two men.

"You'll vouch for this man's identity on your word as an officer?" he asked Dray.

"Of course," the colonel said stiffly, offended.

"So," Dr. Forest said. "You had some trouble getting it off when you wanted to. Tell me what you saw."

"I saw nothing," January said harshly. He took a deep breath; it was time to commit himself. "I want you to take a message back to the scientists. You folks have been working on this thing for years, and you must have had time to consider how the bomb should have been used. You know we could have convinced the Japs to surrender by showing them a demonstration—"

"Wait a minute," Forest said. "You're saying you didn't see anything? There wasn't a malfunction?"

"That's right," January said, and cleared his throat. "It wasn't *necessary*, do you understand?"

Forest was looking at Colonel Dray. Dray gave him a disgusted shrug. "He told me he saw evidence of sabotage."

"I want you to go back and ask the scientists to intercede for me," January said, raising his voice to get the man's attention. "I haven't got a chance in that court-martial. But if the scientists defend me then maybe they'll let me live, see? I don't want to get shot for doing something every one of you scientists would have done."

Dr. Forest had backed away. Color rising, he said, "What makes you think that's what we would have done? Don't you think we considered it? Don't you think men better qualified than you made the decision?" He waved a hand— "God damn it—what made you think you were competent to decide something as important as that!"

January was appalled at the man's reaction; in his plan it had gone differently. Angrily he jabbed a finger at Forest. "Because / was the man doing it, *Doctor* Forest. You take even one step back from that and suddenly you can pretend it's not your doing. Fine for you, but / *was there*."

At every word the man's color was rising. It looked like he might pop a vein in his neck. January tried once more. "Have you ever tried to imagine what one of your bombs would do to a city full of people?"

"I've had enough!" the man exploded. He turned to Dray. "I'm under no obligation to keep what I've heard here confi-dential. You can be sure it will be used as evidence in Captain January's court-martial." He turned and gave January a look of such blazing hatred that January understood it. For these men to

admit he was right would mean admitting that they were wrong—that every one of them was responsible for his part in the construction of the weapon January had refused to use. Understanding that, January knew he was doomed.

The bang of Dr. Forest's departure still shook the little office. January sat on his cot, got out a smoke. Under Colonel Dray's cold gaze he lit one shakily, took a drag. He looked up at the colonel, shrugged. "It was my best chance," he explained. That did something—for the first and only time the cold disdain in the colonel's eyes shifted, to a little hard, lawyerly gleam of respect.

The court-martial lasted two days. The verdict was guilty of disobeying orders in combat, and of giving aid and comfort to the enemy. The sentence was death by firing squad.

For most of his remaining days January rarely spoke, drawing ever further behind the mask that had hidden him for so long. A clergyman came to see him, but it was the 509th's chaplain, the one who had said the prayer blessing the *Lucky Strike's* mission before they took off. Angrily January sent him packing.

Later, however, a young Catholic priest dropped by. His name was Patrick Getty. He was a little pudgy man, bespectacled and, it seemed, somewhat afraid of January. January let the man talk to him. When he returned the next day January talked back a bit, and on the day after that he talked some more. It became a habit.

Usually January talked about his childhood. He talked of plowing mucky black bottom land behind a mule. Of running down the lane to the mailbox. Of reading books by the light of the moon after he had been ordered to sleep, and of being beaten by his mother for it with a high-heeled shoe. He told the priest the story of the time his arm had been burnt, and about the car crash at the bottom of Fourth Street. "It's the truck driver's face I remember, do you see, Father?"

"Yes," the young priest said. "Yes."

And he told him about the game he had played in which every action he took tipped the balance of world affairs. "When I remembered that game I thought it was dumb. Step on a sidewalk crack and cause an earthquake—you know, it's stupid. Kids are like that." The priest nodded. "But now I've been thinking that if everybody were to live their whole lives like that, thinking that every move they made really was important, then... it might make a difference." He waved a hand vaguely, expelled cigarette smoke. "You're accountable for what you do."

"Yes," the priest said. "Yes, you are."

"And if you're given orders to do something wrong, you're still accountable, right? The orders don't change it."

"That's right."

"Hmph." January smoked awhile. "So they say, anyway. But look what happens." He waved at the office. "I'm like the guy in a story I read—he thought everything in books was true, and after reading a bunch of westerns he tried to rob a train. They tossed him in jail." He laughed shortly. "Books are full of crap."

"Not all of them," the priest said. "Besides, you weren't trying to rob a train."

They laughed at the notion. "Did you read that story?"

"No."

"It was the strangest book—there were two stories in it, and they alternated chapter by chapter, but they didn't have a thing to do with each other! I didn't get it."

"... Maybe the writer was trying to say that everything connects to everything else."

"Maybe. But it's a funny way to say it."

"I like it."

And so they passed the time, talking.

So it was the priest who was the one to come by and tell January that his request for a Presidential pardon had been refused. Getty said awkwardly, "It seems the President approves the sentence."

"That bastard," January said weakly. He sat on his cot.

Time passed. It was another hot, humid day.

"Well," the priest said. "Let me give you some better news. Given your situation I don't think telling you matters, though I've been told not to. The second mission—you know there was a second strike?"

"Yes."

"Well, they missed too."

"What?" January cried, and bounced to his feet. "You're kidding!"

"No. They flew to Kokura, but found it covered by clouds. It was the same over Nagasaki and Hiroshima, so they flew back to Kokura and tried to drop the bomb using radar to guide it, but apparently there was a—a genuine equipment failure this time, and the bomb fell on an island."

January was hopping up and down, mouth hanging open, "So we n-never—"

"We never dropped an atom bomb on a Japanese city. That's right." Getty grinned. "And get this—I heard this from my superior—they sent a message to the Japanese government telling them that the two explosions were warn-ings, and that if they didn't surrender by September first we would drop bombs on Kyoto and Tokyo, and then wherever else we had to. Word is that the Emperor went to Hiroshima to survey the damage, and when he saw it he ordered the Cabinet to surrender. So..."

"So it worked," January said. He hopped around, "It worked, it worked!"

"Yes."

"Just like I said it would!" he cried, and hopping before the priest he laughed.

Getty was jumping around a little too, and the sight of the priest bouncing was too much for January. He sat on his cot and laughed till the tears ran down his cheeks.

"So—" He sobered quickly. "So Truman's going to shoot me anyway, eh?"

"Yes," the priest said unhappily. "I guess that's right."

This time January's laugh was bitter. "He's a bastard, all right. And proud of being a bastard, which makes it worse." He shook his head. "If Roosevelt had lived..."

"It would have been different," Getty finished. "Yes. Maybe so. But he didn't." He sat beside January. "Ciga-rette?" He held out a pack, and January noticed the white wartime wrapper. He frowned.

"You haven't got a Camel?"

"Oh. Sorry."

"Oh well. That's all right." January took one of the Lucky Strikes, lit up. "That's awfully good news." He breathed out. "I never believed Truman would pardon me anyway, so mostly you've brought good news. Ha. They *missed*. You have no idea how much better that makes me feel."

"I think I do."

January smoked the cigarette.

"... So I'm a good American after all. I am a good American," he insisted. "No matter what Truman says."

"Yes," Getty replied, and coughed. "You're better than Truman any day."

"Better watch what you say, Father." He looked into the eyes behind the glasses, and the expression he saw there gave him pause. Since the drop every look directed at him had been filled with contempt. He'd seen it so often during the court-martial that he'd learned to stop looking; and now he had to teach himself to see again. The priest looked at him as if he were... as if he were some kind of hero. That wasn't exactly right. But seeing it...

January would not live to see the years that followed, so he would never know what came of his action. He had given up casting his mind forward and imagining possibilities, because there was no point to it. His planning was ended. In any case he would not have been able to imagine the course of the post-war years. That the world would quickly become an armed camp pitched on the edge of atomic war, he might have predicted. But he never would have guessed that so many people would join a January Society. He would never know of the effect the Society had on Dewey during the Korean crisis, never know of the Society's successful campaign for the test ban treaty, and never learn that thanks in part to the Society and its allies, a treaty would be signed by the great powers that would reduce the number of atomic bombs year by year, until there were none left.

Frank January would never know any of that. But in that moment on his cot looking into the eyes of young Patrick Getty, he guessed an inkling of it—he felt, just for an instant, the impact on history.

And with that he relaxed. In his last week everyone who met him carried away the same impression, that of a calm, quiet man, angry at Truman and others, but in a withdrawn, matter-of-fact way. Patrick Getty, a strong force in the January Society ever after, said January was talkative for some time after he learned of the missed attack on Kokura. Then he became quieter and quieter, as the day approached. On the morning that they woke him at dawn to march him out to a hastily constructed execution shed, his MPs shook his hand. The priest was with him as he smoked a final cigarette, and they prepared to put the hood over his head. January looked at him calmly. "They load one of the guns with a blank cartridge, right?"

"Yes," Getty said.

"So each man in the squad can imagine he may not have shot me?"

"Yes. That's right."

A tight, unhumorous smile was January's last expression. He threw down the cigarette, ground it out, poked the priest in the arm. "But I *know*." Then the mask slipped back into place for good, making the hood redundant, and with a firm step January went to the wall. One might have said he was at peace.

### **GREEN HEARTS** Lee Montgomerie

*Genetics is a field that has seen major discoveries in recent years, so it isn't surprising that science fiction writers have increasingly written about the possibilities arising from them. Here we visit the solar system of a future in which not only cloning but also morphological control of plants has become common. It's a very strange place, and this is the story of a strange love.*

*Lee Montgomerie was born and brought up in Zambia; she has lived in England for over a decade. "Green Hearts," which appeared in the adventurous British magazine Interzone, is her first professionally published story.*



When I can no longer bear the cramped tunnels of the colony and my mother's accusing presence (like billions of mothers before her, she cannot understand, she says, how her own daughter has changed overnight into this awkward, defiant and irascible creature), I often volunteer to go topside to check the terraforming project.

Weltering in pubescent irritability, I stumble in my heavy suit through the invisible bloom of lichens, amoebae and bacteria that suffuses the blushing sands, occasionally taking a sample for analysis. I oil the yellow robots that roam the red dunes.

Sometimes I pass the mirror dome in which Bionics Inter-planetary are working on their secret project. It winks at me. My reflective suit winks back.

I wonder how Beanshoot is getting on.

The colonists have long since lost interest in the events which momentarily disturbed our smug autonomy, but the strange arrival of BI's protege still haunts me like an enig-matic dream.

I was in the infirmary for psychiatric assessment at the time.

On one of my mother's infrequent visits, she was suddenly vibrant with anger. "Bionics Interplanetary have returned!"

A fleet of ships bearing the green heart logo had arrived unannounced, disgorging huge quantities of equipment.

"A dome is being constructed in the desert," she told me on her next visit. The team refused to discuss their mission. Their communications personnel had taken over our radio tower, incessantly sending scrambled messages to some ship which was imminently expected.

"Intelligent alien emissaries from another system?" I heard the hospital staff conjecturing. They had been told nothing. Although the terraforming project, the colony's *raison d'etre*, was an official BI enterprise, most of the colonists had come to Mars to get away from Bionics Interplanetary and the damage they had done. My mother never tired of telling me that she had kept me frozen as an embryo for years; had smuggled me to the colony as an undetected pregnancy because Earth had been no place to bring up a child.

Lying in the hospital, I heard the anticipated ship landing. It was an ancient rusty tub, I was told later, from which stepped a half-dozen ageing agoraphobic astronauts, forgotten survivors of some nationalistic showpiece expedition of the pre-Bionic age. They stood blinking and confused on the tarmac while the BI delegation heedlessly shouldered past them, manipulated a large metallic canister from the hold, loaded it into a waiting ambulance and rushed it, lights flashing and sirens screaming, through the tunnels to the hospital.

An anxious BI medical team had been bustling around my ward all day, tensely erecting resuscitation equipment, when the container arrived, accompanied by all the rest of the visitors in a state of extreme nervousness. The Chief Technician was panicking, her fingers fumbling with the unfamiliar clasps, foul-smelling liquid slopping on the floor. At last she prised the crate apart to reveal a man-size, peeling foetus floating in a pool of fluid filled with sloughed skin and moulted hair.

The hospital staff crowded round. "What *is* it?" they asked. They recognised the container as the type that would have been used for transporting large extraterrestrial lifeforms, had any ever been found, but they did not recognise the etiolated creature with the hideous gasmask head as a human being.

The respirator came off to reveal a grey, gluey, uncon-scious face under a bald, veined skull. He was not breathing. The BI team were struggling to insert him into the resuscitation apparatus and the frail creature was blue and writhing, rolling blank eyes and racking his birdcage ribcage. At last he groaned and gasped and flushed and stabilised, and the BI people relaxed, embraced each other in an ecstasy of self-congratulation, and rushed off to organise a briefing conference.

I called my new companion Beanshoot. A can of these pale, embryonic delicacies had once found its way into our supplies. Beanshoot was to lie, helpless and pampered as a newborn, in the bed opposite mine until the establishment under the dome could be completed.

My mother was suddenly a constant visitor. "Imagine," she said, whispering excitedly as if that thing foggily groping and gurgling in the bed across the ward could understand human speech, "that boy is Nole Whard's legal heir! He is probably the richest person in the known universe!" And she looked at Beanshoot with a considerably more fascinated species of disgust than she had before the briefing conference—when she had averted her eyes in contempt from the huge, lolling head mindlessly dribbling synthetic milk all over the BI Chief Technician's biotechnical smock.

"I heard that his survival has been touch and go," she confided. One could not really blame the astronauts. They had left Earth in the pre-Bionic age, had been shocked to find on their return journey a bacterial jungle on Ganymede where at the time of their outward journey not the simplest amino acid had condensed on the icy rocks. More shocked still to discover in the midst of this multicoloured riot, a crashed lifeboat inscribed *SS Titanic*.

Carefully penetrating the airlock, they had searched the tiny capsule, filled with wild hydroponics, for hours before they noticed the naked adolescent, immobile, not bothering to watch them from among the overgrown tomatoes and grapes.

They had never heard of the *Titanic*. Even after their computer had translated the documents, the name Nole Whard had meant nothing to them. Some incomprehensible human man had lived alone on this airless moon, had given birth to a son and then had carefully ventured out into the vacuum by converting himself, cell by cell, into an anaerobic nerve net. Their landing and take-off jets had inadvertently destroyed the delicate intelligent web that guarded the mysterious boy.

They had carried Beanshoot unresisting to their craft but he would not eat, neglected to look at them and seemed unbearably distressed by his non-organic surroundings. Sharing their confined ship with an unresponsive, incontinent, cringing youth was soon unbearable for the astronauts too. They had decided to suspend him until they could get help.

Now, revived by what is called a miracle, he lies opposite me until the complex is completed and the BI team gently pack him in a transparent pressurised coffin and carry him away from the colony, never to return. The astronauts go back to an Earth changed beyond recognition. The hospital finds nothing seriously wrong with me.

"Impossible," my mother insists—"you *must* be insane." I have defiled my human purity with the Bionic Interface. She found the used scalpel in the recycling bin and insisted on inspecting me naked. Even so, she almost missed the tightly-curved pink flower bud on my left breast that almost perfectly matched my right nipple.

How many times she has told me about the youth of Earth and how they have abused their bodies—thrown them away, even—their worthless brains inhabiting the savage chimerae that terrorise the forests of Earth's once-peaceful cities? How dare I secretly violate my unique phenotype? The bud constantly accuses her through my shabby spacesuit liners. She cannot bear the sight of me.

I resume my solitary rambles on the dunes, communing with the lichens, passing and repassing the enigmatic dome. One day a pressure-suited figure emerges from the winking bubble and beckons me in.

I am weak. The inside of the dome is a sickening holo-gram. I have never before stood on anything more vertiginous than a rock. Now my brain refuses to believe that I am not perched on a dizzy platform high up among the swaying floral pinnacles of an Earthly city. The BI Chief Technician takes her helmet off and invites me to do the same. "Ah. You are Jeni, are you not? I am sure you must remember Nole Whard Junior. Would you like to meet him?"

We go inside the complex. Beanshoot is sitting staring out of the window at the perilous towers of the

illusory city. He turns his head when I walk in, fixing me with a penetrating stare but saying nothing. I am silent in return, avoiding the scenery, searching for a resemblance to his famous father in those sad eyes burning in a stubbly skull furrowed with fresh scars. The BI team gather round to observe our interaction. I cannot bear it. I leave. I say nothing to mother.

For nights I dream that I am losing my grip among the foliage of a precipitous Earthly skyscraper. I wake with thumping heart and sweaty hands. A few days later I am back outside the mirror dome that reflects my mirror helmet, knocking.

BI are pleased to see me. Beanshoot suddenly has his famous father's famous head of red-gold hair (I had seen it growing in the outdoor garden which blends into the holo-gram, I suddenly realise). "It is Jeni!" he says. He smiles at me. Disconcerting to be greeted so eagerly by the long-lost consensual overlord of Earth. I am too shy to smile back. I leave early. For a long time, I ramble through the sands within the virtual limits of the hologram, imagining myself a winged bio-abuser floating among those perfumed floral turrets.

The next time we meet, we talk.

I tell Beanshoot about our minimal microbial ecology. He takes me into the garden and shows me his clumsy bionic experiments. He is converting a cactus into a kitten. It comes leaping over the sessile vegetation to greet us, awkward on four legs all different lengths. Its eyes, matched neither in colour nor in size, are both on the same side of its head. I pick it up. Its Green Heart flutters. I stroke its petal ears. "I think it needs a tail," I tell him. Together we work on it with the Bionic Interface and a muscular tendril from a predatory vine. The scalpel cuts cleanly through the flesh, spreading a layered red/green paste which seals the wound and glues the organisms together. We upholster the tail with the furry fungus which covers the rest of the cat. The kitten loves its tail. It chases it around the garden. We laugh. BI approve.

I become a frequent visitor to the dome.

Sometimes Beanshoot is not around to greet me. Asleep, or studying, the team say. "A good time for a chat," says the

Chief Technician, sitting me down and offering me some of the wild food to which I am growing accustomed. We talk about the colony, my mother, the microscopic culture we are establishing in the sand.

I explore the compartments of the complex. One day I open the door of an untidy cubicle, littered with toys and books. Beanshoot is curled up on the rumpled bed, kitten snoring on the pillow, his thumb in his mouth, a tangle of wires leading from his tousled hair to a rack of boxes under the bed. Poor puppet.

"There are things you need to understand," the Chief Technician says. "Beanshoot is not Nole Whard's child. He is his clone. He is Earth's most precious asset. His brain is an exact duplicate of the one that held the most brilliant intellect the world had ever willingly harboured, but he has spent his formative years bathed in the morphogenetic influence of brainless sessile vegetables. All BI are doing in this secret project on Mars is to recapitulate a childhood for him before he returns to take his place as the master of Earth. Nothing sinister. We are so glad to have found him a friend of his own age to share his experience.

"I have never seen you in anything but a suit or liner," she reminds me. "Would you like to try some Earthly clothes?" She fetches me a shapeless suit, woven from gut, muscle, nerve and chameleon.

As soon as I step into the flaccid pinkish-grey bag, it blushes with brilliant colour and contracts to fit my shape. It seems to enhance my movements somehow. I feel less awkward. When I leave for home, I put my clothes on top of it, not wishing to take it off. It immediately changes colour to perfectly match my skin, imperceptible joints at wrists, ankles and waist. I peer down the neck of my liners. Even if my mother discovers that I am wearing a biotechnical artefact, she will probably approve of the way I have

eliminated my sexual characteristics. How like a child I am again.

I wear my Earthly outfit constantly. It never needs wash-ing. It digests all the dirt and produces a thin thread of excrement which I add to the diet of my microorganisms. When I reach the dome, I shed my suit and liners and wear it alone. Its colour and pattern vary with the weather and my mood, and alter as I move. Its hints to my muscles enliven the athletic games that Beanshoot and I now play in the garden, brachiating among the more climbable trees, project-ing our fantasies into the hologram, imagining ourselves to be regressed gorillas swinging through the dizzy skyscrapers of Earth.

Sometimes Beanshoot is uneasy and wary of me. "A sign of maturity," the Chief Technician says. Soon they will take Nole Whard Junior back to Earth, leaving the dome to my microforms and Mars to my mother and her friends.

I don't want them to leave. I am happy. The biological food has cleared my skin. The biotechnical suit makes me graceful and shapely. My mother is more at ease with me now, assuming that my handpicked genes are asserting them-selves at last. Until the day comes when she decides (not suspecting anything, of course, she is to tell me) to follow me on one of my outings.

How surprised she is to find me consorting with the enemy! She gasps at the hologram in disbelief. She boggles at my vivid biotechnical garments, the garden filled with our wild experiments, my companion, startling in his likeness to his progenitor. "My *God!* No wonder you have been looking so smug!" She pushes into the complex. Beanshoot and I are left outside. For hours we sit against the wall, mindlessly reassembling the vegetation at hand, while they talk inside.

Beanshoot is lucky to have spent his whole childhood without parents, I tell him. Of course he has a dozen of them now, manipulating him not just with words but with wires, drugs, surgery, hypnotism, morphogenetic generators. I stroke his hair and feel the honeycomb of raw sockets beneath. He twitches my hand away.

Hours later my mother emerges. She does not look at me. She snaps into her mirror suit and leads me back to the colony, maintaining radio silence.

"Oh yes," she says casually as we unsuit in our cabin. "I have had a very interesting talk with the Bionics Interplane-tary people. Very interesting." She smiles. She steps out of her suit and liners. She is wearing a biotechnical suit like mine; a superior version, jewelled and shimmering. "They are charming people. Nole Whard Junior is a lovely boy. Why didn't you tell me about him? You must go and see him again soon."

She sounds like the BI Chief Technician. I am enraged. She detests everything that Bionics Interplanetary has ever done and yet she ingratiates herself with the people who are trying to recreate the man who was responsible for it all. Well, I am certainly not going back there to enrich the experience of their puppet clone!

I return to my morose rambles in the dunes, my sullen stints in the laboratory, profiling the soil. I bury my biotechnical suit in the sand. My active little friends consume it in a morning. The complexity profile of the area increases alarm-ingly. I expect a startling new lifeform to emerge imminently, preferably a carnivorous phage that preys on biotechnical garments and their wearers.

I shun the dome.

I shun the colony.

I patrol the limbo between.

Eventually the day comes when I brood so long in the fug of my exhalations and angst that my oxygen supply is insufficient to take me back to the tunnels. Either I go to the dome, or I am found dead on the dunes in the morning. Either way, my mother will be secretly relieved. I choose the dome.

The sun has set when I get there. Beanshoot opens the airlock himself. Inside the dome there is no hologram, only the dim image of the landscape I have just left, bathed in the last red flush of sunset and the yellow headlamps of the robots that relentlessly comb the dunes.

Beanshoot must have seen me coming.

He is trembling.

I take off my helmet and breathe with relief the fresh air that rushes from the solar photosynthesising battery, still gushing oxygen when the last solar photons have slid behind the planet.

The garden is naked in the dark. The flowers are closed. The food has all been picked. The trees in which we swung in our careless ape existence have lost their foliage. Our kitten, long fallen under the morphic influence of its vegetable ancestors, has taken root again, a fat furry bundle snoring in the soil.

The complex is partially dismantled, the laboratory stripped, the project records packed and stacked outside.

Beanshoot's education is complete. The terrifying Nole Whard, architect of the Bionic Revolution, bogeyman of Mars, destroyer of my mother's dreams, stands before me—the famous steely charismatic eyes devouring me from the flushed, twitching and rapacious face.

I shrink inside my suit.

He frightens me. I cannot bear to lose him. Inside this threatening reincarnation of the most recent of the Earthly gods—the Lord of the Millennium—floats the frail foetus (luminous in my imagination) whose helplessness burned my heart as I lay angry in hospital.

We touch.

My padded suit feels nothing.

My eyes challenge my old companion to emerge from this menacing stranger.

My body betrays me.

Inside my suit and liners, excited by a hormonal hair-trigger, I feel the bud on my breast stir, tingle, part and swell; a florid blossom throbbing against my thudding heart.

Vibrated by some pheromonal harmonic, the whole garden stirs.

My mother still sighs with nostalgia over the Earth of her childhood. The Green Heart and the Bionic Interface already dominated agriculture, but the origins of their food had never interested the inhabitants of the steel and concrete city in which she dwelt.

The sudden urban fashion for bionic artefacts did not interest her either. She loathed the tenements of her birth where the neighbourhood youth had suddenly sprouted horns, fangs, talons and stings and terrorised the district; sometimes, after a midnight orgy of howls and rooftop scramblings, leaving a gnawed and part-dismembered corpse in her sterile backyard, constantly scoured of biological enemies.

She despised the suburban gardens where animate plants frolicked among the newly exotic flora; the bourgeois living-rooms where rumbustious toddlers harmlessly clambered over the robust, self-renovating, seed-grown furniture while their mothers fiddled with the bright feathers and flowers growing in their hair.

Perhaps, as she flicked through the financial papers, looking for a man who would marry her and carry her away to a world of timeless prosperity untouched by fashion, she noticed the features of young Nole Whard, charismatic ecology-conscious promoter of biotechnical artefacts, whose company, Bionics Inc., was soaring to astonishing success on a wave of ecological angst and millennial fervour. If so, she was appalled at the vulgarity of both his products and his sales pitch. The man was trying to make the whole world crawl with shame at the way the conventional industries had treated the planet, and then to

promise an almost religious salvation if they turned from their sins and restored the biosphere to the green domain of their biological companions.

Not in barbary, but with all the comforts of a civilisation. Bionics International, as it was by then, had cornered, some say invented, applied morphogenesis. Nole Whard could grow anything. Machines were just crude imitations of living things, he would say; let us grow living things to do their work. Let us fashion from the soil all the comforts of the new age in which humanity would be reborn in a new garden of Eden; a second chance under skies scoured of industrial pollution; the raped and tormented Earth consoled at last by partnering a perfect new humanity in a bounteous, blissful and fruitful marriage.

The year 2000 was approaching. The skies were dark, acid, depleted of oxygen. The industrial culture had exhausted itself, the last few factories expelling their effluents into a landscape of rusting dereliction roamed by the despairing unemployed. My mother, having successfully climbed the ladder by virtue of her beauty and ambition, marrying an entre-preneur in a safe-looking conventional industry, sat comfort-ably in her sterile marble house surrounded by concrete walls, waiting for the tide to turn.

Catastrophe theory applies to morphogenetics. The moment came when the accumulated resonances from BI's inventions started to vibrate every organism on the planet. Nole Whard was quite suddenly swept to power as the prophet of the new Bionic age, his intense, shining face filling all the media windows, his vibrant voice promising to vanquish all four horsemen of the Apocalypse with the green sword of Bionics.

BI became the most successful company in the history of capitalism. Every other industry went under. My mother's husband jumped from the towering concrete emblem of his achievement just before the cities crumbled to fragments, their foundations shattered by the thrusting shoots of sky-scrapers springing in entirety from a single seed. My mother's concrete courtyard buckled. Her sheltering walls collapsed. The seething, teeming, unstoppable life of the city irrupted into her once secure domain. Bitterly, she faced the future, seeing in this jubilant refflorescence only the revenge of the bugs, mould and excrement of her slum upbringing which she had been trying to expunge all her life.

The last surviving conventional industry, using metal con-centrated by foliage, smelted by energy extracted from rotting compost, created the fleet of spaceships whereby the freshly-rechristened Bionics Interplanetary would spread the irresist-ible message to the rest of the system. Blue-green algae on Mars. Lichens on Venus.

All the accumulated wealth and pull of her husband's lost empire were just enough to secure my mother a place in the Martian colony. She was carrying her last, hoarded treasure: an embryo combining her beautiful, ambitious chromosomes with those of a certified genius of outstanding physique, all harmful genes enzymed out. Only slightly consoled by the news that Nole Whard, personally accompanying the promis-ing Titan expedition in an invincible, infinitely-survivable ship, had met an uncalculated asteroid and been presumed pulverised, she turned her back on Earth.

She never intended to return.

But now she does.

All through the trip to Earth she prances through the ship in her sparkling biotechnical suit, rejoicing; her antipathy to all BI and I have wrought forgotten in her dizzying, preening pride. Her smiles irradiate the whole cabin. Beanshoot and I, instruments of her success, stare sullenly at each other, strang-ers again. We have not had a moment alone together since those last few seconds in the unfurling garden before the ever vigilant BI team rushed out and proposed a marriage between us. "How we hoped you would say yes," they said, after I had contemplated life without my refuge, and said it. "You have been part of the project all along, after all."

And so we are married on the flight deck of the ship at the moment that it enters Earth orbit for the final approach to the spaceport. As we exchange our vows, the drive is cut and we achieve

weightlessness. We are swept off our feet, head over heels, revolving around each other in the great control bubble, our hair and clothes billowing. We cannot reach each other. I have to throw my bouquet into the wheeling crowd to project myself within grappling distance of my bridegroom who finally, fumblingly, puts a ring on my finger as the ship makes a ring around the planet. Dizzy and nauseous. We kiss. Our dry, doubting lips pressed apprehensively together. My mother and the BI team, anchored to cleats in the walls, ringingly cheer us, delight and relief shining in their faces.

We land.

I step out of the spaceship and straight into shock. Out-doors without protection, I imagine myself suffocating in the oxygen-rich atmosphere, i choke. Strange pollens and per-fumes irritate my respiratory system. I weep. Gravity clamps my feet to the ground. I stumble. The swaying green build-ings tower alarmingly above me.

I cling to Beanshoot for support. He is smiling expan-sively, entranced by the mobile plants which cluster around us, fronds upraised to savour our carbon dioxide, calyces begging our hands for pollination. My mother, ignoring ev-erything external, embraces us both in an excess of irrepress-ible joy. The President of Bionics Interplanetary himself strides towards us, kicking aside the floral carpet which has pros-trated itself at our feet.

A jostling crowd of news-crews surges an awed distance away, trying to encapsulate in this emotional tableau all the drama, poignancy and relief of the return to Earth of the miraculously-rescued, miraculously-restored avatar of the saviour of humanity on the day of his wedding to an ethereally-beautiful Martian child bride. A hushed human throng watches us from every level of the verdant towers.

We are driven in a closed carriage to the grandest hotel in the city, a rare haven of glass and metal modules grafted to the branches of a tranquillised oak. Accompanied by a fussing retinue of BI primpers, bustling around us with clothes, jew-els, cosmetics and drugs. Just for a few moments we are left alone. Rigid on the plastic bed, afraid to spoil our perfect finish, we gaze into each other's dazed, glazed eyes.

Our nervous hands touch. Poor us. The only thing we have in common is that we have both been manipulated all our conscious lives. The last act of our tormentors has been to gently inject us with the pubescent hormones that BI have been suppressing since we became part of the project.

Desire suffuses me. I try to embrace my new husband. Our biotechnical dancing garments force us into a stylised clasp; wrists and elbows flexed, fingers spread and extended.

Beanshoot reddens. Our hot cheeks touch. Our lips meet. His pirouetting fingers brush my flower, erect petals pressing the restraining fabric. Pulling with all his strength at the neck of my dress, he bends his head to my blossom.

His lips encircle my corolla. His tongue probes my tingling petals. My pistil throbs. The fingers of his right hand gently massage my swollen sepals; his left hand whitens as he struggles with the strenuously-resisting neckline. My skirt binds my legs. I writhe on the bed. A sudden gush of hot saliva, swimming with inhaled pollen, floods my burning calyx.

They come for us. We sit up, blushing. The neck of my dress rises angrily to my throat.

We are driven in a low-flying winged chariot to an infor-mal reception at the top of the BI tower. We sit apart, both wrapped in the revived fantasies of our interrupted adoles-cence. Crowds line the streets, staring at us in silent awe. The whole city is in bloom, our floral portraits on huge hoardings, a rain of scented petals spiralling down around us. As the sun goes down, photoluminescent bacteria light up.

The top of the BI tower is open to the sky. It is the original of our familiar hologram, disturbing again now that the dizzy-ing drop is no longer an illusion. The President introduces us to various dignitaries. We eat and drink. We dance.

My mother takes the President by the hand and twirls him away in her twinkling galaxy of a dress, floating on wave after wave of vindicated ambition. Beanshoot and I cling together, hot faces touching, tender bodies brushing in our energetic garments which tirelessly circle the dance floor while we shuffle inside them aching with gravity, exhaustion, misery and desire.

The President bows and asks me for the pleasure and my mother pirouettes Beanshoot away in her tireless, rapturous ecstasy. I watch him over the President's shoulder. He is watching the plants, dreamily.

The President smiles affably. "No doubt you think Nole Whard Junior is the most important person in the world," he says. "You are right of course. The entire population of this planet is in resonance with his field. His father was their leader. Now they need to be led again."

Nole Whard Senior was a genius. But he was not really an astute businessperson. More a Messiah. Bionics has become a religion. Most of BI's products are now outside the economy, having reproduced or gone autonomous. They have to get back to steel and concrete. Nole Whard Junior and I must inspire the young; wean them away from their jungle existence, living free in the trees and on drugs, and get them back to robot jewellery and holographic clothes. He knows that we will do a good job, especially as our fields have been recannulated by our largely artificial environments.

He beams at his dreams. "Now I must return you to your husband." But where is he? I search for his golden corona among the gathering. "He was talking to the plants," my mother says; "he was fascinated by them."

We call to him. No answer.

We anxiously peer over the sickening drop. No crumpled body in the undergrowth. "He can climb like a monkey," I tell them.

"No sense in alarming anybody," says the President. He will take us back to the hotel where no doubt my husband will join us shortly.

We wait all night. I lie on the bed while next door my mother wails and paces the room. Our luminous floral portraits burn through the night.

The morning brings the President, stern and distant, informing us that Nole Whard Junior has still not been found. Fortunately the marriage has not been consummated, so there will be no problems about ending it.

My mother weeps and draws the blinds against the alien landscape, her triumph turned to bitterness.

Sad music emanates noncommittally from the holovision.

Above my aching heart, a hard seed is setting in the ovary of my breast flower.

My dancing dress has died and hangs limp and brown on the chairback.

A green tendril sneaks under the door sill, avoiding my mother's field of vision as she sobs in front of the dresser mirror. Hour by hour, it inches across the floor. I watch it silently. As dawn approaches, it reaches my bed and tugs at my hand. My mother is snoring in her chair. I put on my old spacesuit liners and go out after it.

I am not in the well-trimmed streets through which we flew on rainbow birdwings amid showers of petals and cascades of multicoloured blossoms opening in sequence. I am not worshipped by adoring throngs but stalked by skulking tigers and shambling apes, their mean human faces poking through the transplanted fur. Most of the buildings have gone wild and are sprouting shapeless spare rooms in which these beasts have made their untidy nests. A bird the size of a light aircraft takes off, its massive wings clattering, a shredded biotechnical garment dangling from its beak. Ugly ambulant plants sidle up and press their tumid calyces against me, dusting my liners with pollen.



Before I have gone half a block, my mother catches up. "You cannot go out here! Have you any idea how dangerous it is? These people are animals!" Outside Snakey's All-Night Bio Parlour, a pride of mangy lions are tearing at a headless torso, their tacky manes clotted with blood. Ignoring my mother's disgust, I follow the vine to its conclusion.

We find Beanshoot in a tangle of service roots at the base of the BI tower. Only his head is visible above the blanketing undergrowth. He is lying in a bower of flowers, protected by a cage of thorns, his face as contented as when he suckled a bottle of milk on the Chief Technician's knee.

"What does he mean by this?" my mother yells; "doesn't he know we have been out of our minds with worry?"

Beanshoot turns his head and looks at us comfortably (insolently, I imagine my mother thinking), then turns back to the blossoms which congregate around his head.

"Has he no thought for others? Going off with a *plant* on his *wedding night*'t These vegetables don't give a damn about him. All he is to them is fertiliser—manure!"

She runs bellowing into the BI building to fetch the Presi-dent, who arrives in an armoured suit and respirator, leading an armoured team, mincing in trepidation around the poi-soned spurting spears that the plant has thrown up in self-defence. My mother is screaming even louder because now I am inside the deadly cage.

\* \* \*

As soon as she had gone, he turned to me. The vine still in my hands contracted, the barricade of thorns parted, and I crawled inside the green shelter, pushing aside the clustering blossoms and pressing my head to his. Don't worry, I said. I stroked his cheek. It was cold and dewy. His skin looked greenish in the early light. His mouth moved without words. I have just kissed his clammy, pollen-crust-ed lips and am searching for his honeyed tongue when the President and his team move in, brandishing machetes, flamethrowers and her-bicidal aerosols.

Our thorns go into action.

All the plants in the square join in: flailing venomous tendrils, whiplashing vines, pods bursting like bombs. A stench of sap and roasting vegetables and unsmelt defensive pheno-mones that whip the unprotected into a screaming panic. ("Get out, Jeni, get out!" my mother shrieks, but by now I am bound to the ground by a web of tendrils.)

The BI team move on, imperturbable in armour, hacking, burning and spraying, while my mother howls in desperation and I twist in the grip that binds me eye-to-eye with Beanshoot's terrified face.

My hair and liners are on fire. Weedkiller sears my lungs. My blood splatters our faces. A rain of toxic sap slops from the blades of the slashing machetes.

At last the resistance dies down and I lie, gently unbound, in a blackened, blighted thicket; staring into Beanshoot's foggy eyes as the team scrabble to unearth him. They clear the fallen petals from around his head and neck and then stagger back in shock as the unmistakable red/green sandwich of the Bionic Interface comes into view, followed by the wheezing sponge of a failing Green Heart.

From there down, he is all roots.

I faint.

I wake in a rectangular chamber filled with diffuse golden light.

I have no heart. I am not breathing. Pain scrapes my eviscerated thorax. My raw skin still burns.

My mother hovers over my bed. "Dead!" she whimpers occasionally. The President paces the room, moving in and out of the field of vision of my unfocused, immobile eyes; his angry strides quaking the

floor. "It has gone much too far!" he mutters, throwing up some shade to let a white rectangle into the golden haze of the room. "Look at them all out there! They have taken over the world! How did we let it happen?"

"Dead," my mother sniffs again, "poor boy!" So it is not I who am dead! Something out of my sight is circulating and ventilating my blood. A new heart and lungs developing among the blood clots in my chest cavity.

"Kidnapped, raped and *killed* by a fucking autonomous vegetable!" the President bursts out, agonised.

"Poor boy," my mother says. "Nobody should die in this day and age. Nole Whard Junior was so innocent." She has heard on the holovision that the plant entrapped him on the dancefloor—trussing him with its tendrils, gassing him with its perfume, hauling him down the side of the building with its vines. How terrible it was to see her son-in-law in its rapacious clutches!

She sobs. "Just for a moment, while I watched the rescue, I imagined—of course my mind was mostly on my poor daughter—but I thought I saw—for a second I thought that the silly boy had deliberately interfaced himself with the plant. Then I heard on the holo that the dying vegetable, its roots having already reduced his body to gnawed bones, had cut his throat with one last spiteful slash of its thorns, rather than surrender him. Oh my God. Jeni cannot hear me, can she?"

"No," says the President. "Your daughter will be unconscious for a long time yet. The shock. She has been very badly burned. But you must not worry. We are growing her a new skin. New breasts as well. Your daughter will be lovelier than ever."

"The estate..." My continuing good looks assured, my mother is turning her mind to Nole Whard's billions.

"That will go to his son, of course."

"His son?"

My mother's spasm of alarm rocks my bed.

"Well, naturally, we had him cloned as soon as we could get a sample to the lab. Nole Whard III will be a lively blastocyst by now."

Tears fall onto my bandages. A quavering wail escapes my mother's throat. "*My daughter!*"

"No safer place for a clone than a female uterus," says the

President benignly. I feel my mother relax. Joy eases her heart. Her daughter, virgin mother to the prophet of the steel and concrete renaissance, new skin glowing with radiant maternity, new breasts swollen with celestial milk.

My mother's vanity squirms in my womb, sickening me. I try to protest. I have no breath. A drug paralyses me.

Smiling, on the arm of the President, my mother leaves the room.

*BLOODCHILD* Octavia E. Butler

*Here is a powerful and moving story about humans living as chattel to an alien race on a far planet. The relationship between the races is fascinating... and as we gradually learn more about it, it becomes more than a bit horrifying.*

*Octavia E. Butler's novels include Wild Seed and Clay's Ark.*

My last night of childhood began with a visit home. T'Gatoi's sisters had given us two sterile eggs. T'Gatoi gave one to my mother, brother, and sisters. She insisted that I eat the other one alone. It didn't matter. There was still enough to leave everyone feeling good. Almost everyone. My mother wouldn't take any. She sat, watching everyone drifting and dreaming without her. Most of the time she watched me.

I lay against T'Gatoi's long, velvet underside, sipping from my egg now and then, wondering why my mother denied herself such a harmless pleasure. Less of her hair would be gray if she indulged now and then. The eggs prolonged life, prolonged vigor. My father, who had never refused one in his life, had lived more than twice as long as he should have. And toward the end of his life, when he should have been slowing down, he had married my mother and fathered four children.

But my mother seemed content to age before she had to. I saw her turn away as several of T'Gatoi's limbs secured me closer. T'Gatoi liked our body heat, and took advantage of it whenever she could. When I was little and at home more, my mother used to try to tell me how to behave with T'Gatoi— how to be respectful and always obedient because T'Gatoi was the Tlic government official in charge of the Preserve, and thus the most important of her kind to deal directly with Terrans. It was an honor, my mother said, that such a person had chosen to come into the family. My mother was at her most formal and severe when she was lying.

I had no idea why she was lying, or even what she was lying about. It *was* an honor to have T'Gatoi in the family, but it was hardly a novelty. T'Gatoi and my mother had been friends all my mother's life, and T'Gatoi was not interested in being honored in the house she considered her second home. She simply came in, climbed onto one of her special couches and called me over to keep her warm. It was impossible to be formal with her while lying against her and hearing her complain as usual that I was too skinny.

"You're better," she said this time, probing me with six or seven of her limbs. "You're gaining weight finally. Thinness is dangerous." The probing changed subtly, became a series of caresses.

"He's still too thin," my mother said sharply.

T'Gatoi lifted her head and perhaps a meter of her body off the couch as though she were sitting up. She looked at my mother and my mother, her face lined and old-looking, turned away.

"Lien, I would like you to have what's left of Gan's egg."

"The eggs are for the children," my mother said.

"They are for the family. Please take it."

Unwillingly obedient, my mother took it from me and put it to her mouth. There were only a few drops left in the now-shrunken, elastic shell, but she squeezed them out, swallowed them, and after a few moments some of the lines of tension began to smooth from her face.

"It's good," she whispered. "Sometimes I forget how good it is."

"You should take more," T'Gatoi said. "Why are you in such a hurry to be old?"

My mother said nothing.

"I like being able to come here," T'Gatoi said. "This place is a refuge because of you, yet you won't take care of yourself."

T'Gatoi was hounded on the outside. Her people wanted more of us made available. Only she and her political faction stood between us and the hordes who did not understand why there was a Preserve—why any Terran could not be courted, paid, drafted, in some way made available to them. Or

they did understand, but in their desperation, they did not care. She parceled us out to the desperate and sold us to the rich and powerful for their political support. Thus, we were necessities, status symbols, and an independent people. She over-saw the joining of families, putting an end to the final remnants of the earlier system of breaking up Terran families to suit impatient Tlic. I had lived outside with her. I had seen the desperate eagerness in the way some people looked at me. It was a little frightening to know that only she stood between us and that desperation that could so easily swallow us. My mother would look at her sometimes and say to me, "Take care of her." And I would remember that she too had been outside, had seen.

Now T'Gatoi used four of her limbs to push me away from her onto the floor. "Go on, Gan," she said. "Sit down there with your sisters and enjoy not being sober. You had most of the egg. Lien, come warm me."

My mother hesitated for no reason that I could see. One of my earliest memories is of my mother stretched alongside T'Gatoi, talking about things I could not understand, picking me up from the floor and laughing as she sat me on one of T'Gatoi's segments. She ate her share of eggs then. I wondered when she had stopped, and why.

She lay down now against T'Gatoi, and the whole left row of T'Gatoi's limbs closed around her, holding her loosely, but securely. I had always found it comfortable to lie that way but, except for my older sister, no one else in the family liked it. They said it made them feel caged.

T'Gatoi meant to cage my mother. Once she had, she moved her tail slightly, then spoke. "Not enough egg, Lien. You should have taken it when it was passed to you. You need it badly now."

T'Gatoi's tail moved once more, its whip motion so swift I wouldn't have seen it if I hadn't been watching for it. Her sting drew only a single drop of blood from my mother's bare leg.

My mother cried out—probably in surprise. Being stung doesn't hurt. Then she sighed and I could see her body relax. She moved languidly into a more comfortable position within the cage of T'Gatoi's limbs. "Why did you do that?" she asked, sounding half asleep.

"I could not watch you sitting and suffering any longer."

My mother managed to move her shoulders in a small shrug. "Tomorrow," she said.

"Yes. Tomorrow you will resume your suffering—if you must. But for now, just for now, lie here and warm me and let me ease your way a little."

"He's still mine, you know," my mother said suddenly.

"Nothing can buy him from me." Sober, she would not have permitted herself to refer to such things.

"Nothing," T'Gatoi agreed, humoring her.

"Did you think I would sell him for eggs? For long life? My son?"

"Not for anything," T'Gatoi said, stroking my mother's shoulders, toying with her long, graying hair.

I would like to have touched my mother, shared that moment with her. She would take my hand if I touched her now. Freed by the egg and the sting, she would smile and perhaps say things long held in. But tomorrow, she would remember all this as a humiliation. I did not want to be part of a remembered humiliation. Best just to be still and know she loved me under all the duty and pride and pain.

"Xuan Hoa, take off her shoes," T'Gatoi said. "In a little while I'll sting her again and she can sleep."

My older sister obeyed, swaying drunkenly as she stood up. When she had finished, she sat down beside me and took my hand. We had always been a unit, she and I.

My mother put the back of her head against T'Gatoi's underside and tried from that impossible angle to look up into the broad, round face. "You're going to sting me again?"

"Yes, Lien."

"I'll sleep until tomorrow noon."

"Good. You need it. When did you sleep last?"

My mother made a wordless sound of annoyance. "I should have stepped on you when you were small enough," she muttered.

It was an old joke between them. They had grown up together, sort of, though T'Gatoi had not, in my mother's lifetime, been small enough for any Terran to step on. She was nearly three times my mother's present age, yet would still be young when my mother died of age. But T'Gatoi and my mother had met as T'Gatoi was coming into a period of rapid development—a kind of Tlic adolescence. My mother was only a child, but for a while they developed at the same rate and had no better friends than each other.

T'Gatoi had even introduced my mother to the man who became my father. My parents, pleased with each other in spite of their very different ages, married as T'Gatoi was going into her family's business—politics. She and my mother saw each other less. But sometime before my older sister was born, my mother promised T'Gatoi one of her children. She would have to give one of us to someone, and she preferred T'Gatoi to some stranger.

Years passed. T'Gatoi traveled and increased her influence. The Preserve was hers by the time she came back to my mother to collect what she probably saw as her just reward for her hard work. My older sister took an instant liking to her and wanted to be chosen, but my mother was just coming to term with me and T'Gatoi liked the idea of choosing an infant and watching and taking part in all the phases of development. I'm told I was first caged within T'Gatoi's many limbs only three minutes after my birth. A few days later, I was given my first taste of egg. I tell Terrans that when they ask whether I was ever afraid of her. And I tell it to Tlic when T'Gatoi suggests a young Terran child for them and they, anxious and ignorant, demand an adolescent. Even my brother who had somehow grown up to fear and distrust the Tlic could probably have gone smoothly into one of their families if he had been adopted early enough. Sometimes, I think for his sake he should have been. I looked at him, stretched out on the floor across the room, his eyes open, but glazed as he dreamed his egg dream. No matter what he felt toward the Tlic, he always demanded his share of egg.

"Lien, can you stand up?" T'Gatoi asked suddenly.

"Stand?" my mother said. "I thought I was going to sleep."

"Later. Something sounds wrong outside." The cage was abruptly gone.

"What?"

"Up, Lien!"

My mother recognized her tone and got up just in time to avoid being dumped on the floor. T'Gatoi whipped her three meters of body off her couch, toward the door, and out at full speed. She had bones—ribs, a long spine, a skull, four sets of limb bones per segment. But when she moved that way, twisting, hurling herself into controlled falls, landing running, she seemed not only boneless, but aquatic—something swimming through the air as though it were water. I loved watching her move.

I left my sister and started to follow her out the door, though I wasn't very steady on my own feet. It would have been better to sit and dream, better yet to find a girl and share a waking dream with her. Back when the Tlic saw us as not much more than convenient big warm-blooded animals, they would pen several of us together, male and female, and feed us only eggs. That way they could be sure of getting another generation of us no matter how we tried to hold out. We were lucky that didn't go on long. A few generations of it and we would have *been* little more than convenient big animals.

"Hold the door open, Gan," T'Gatoi said. "And tell the family to stay back."

"What is it?" I asked.

"N'Tlic."

I shrank back against the door. "Here? Alone?"

"He was trying to reach a call box, I suppose." She carried the man past me, unconscious, folded like a coat over some of her limbs. He looked young—my brother's age perhaps—and he was thinner than he should have been. What T'Gatoi would have called dangerously thin.

"Gan, go to the call box," she said. She put the man on the floor and began stripping off his clothing.

I did not move.

After a moment, she looked up at me, her sudden stillness a sign of deep impatience.

"Send Qui," I told her. "I'll stay here. Maybe I can help."

She let her limbs begin to move again, lifting the man and pulling his shirt over his head. "You don't want to see this," she said. "It will be hard. I can't help this man the way his Tlic could."

"I know. But send Qui. He won't want to be of any help here. I'm at least willing to try."

She looked at my brother—older, bigger, stronger, certainly more able to help her here. He was sitting up now, braced against the wall, staring at the man on the floor with undisguised fear and revulsion. Even she could see that he would be useless.

"Qui, go!" she said.

He didn't argue. He stood up, swayed briefly, then steadied, frightened sober.

"This man's name is Bram Lomas," she told him, reading from the man's arm band. I fingered my own arm band in sympathy. "He needs T'Khotgif Teh. Do you hear?"

"Bram Lomas, T'Khotgif Teh," my brother said. "I'm going." He edged around Lomas and ran out the door.

Lomas began to regain consciousness. He only moaned at first and clutched spasmodically at a pair of T'Gatoi's limbs. My younger sister, finally awake from her egg dream, came close to look at him, until my mother pulled her back.

T'Gatoi removed the man's shoes, then his pants, all the while leaving him two of her limbs to grip. Except for the final few, all her limbs were equally dexterous. "I want no argument from you this time, Gan," she said.

I straightened. "What shall I do?"

"Go out and slaughter an animal that is at least half your size."

"Slaughter? But I've never—"

She knocked me across the room. Her tail was an efficient weapon whether she exposed the sting or not.

I got up, feeling stupid for having ignored her warning, and went into the kitchen. Maybe I could kill something with a knife or an ax. My mother raised a few Terran animals for the table and several thousand local ones for their fur. T'Gatoi would probably prefer something local. An ahti, perhaps. Some of those were the right size, though they had about three times as many teeth as I did and a real love of using them. My mother, Hoa, and Qui could kill them with knives. I had never killed one at all, had never slaughtered any animal. I had spent most of my time with T'Gatoi while my brother and sisters were learning the family business. T'Gatoi had been right. I should have been the one to go to the call box. At least I could do that.

I went to the corner cabinet where my mother kept her larger house and garden tools. At the back of the cabinet there was a pipe that carried off waste water from the kitchen—except that it didn't anymore. My father had rerouted the waste water before I was born. Now the pipe could be turned so that one half slid around the other and a rifle could be stored inside. This wasn't our only gun, but it was our most easily accessible one. I would have to use it to shoot one of the biggest of the ahti. Then T'Gatoi would probably confiscate it. Firearms were illegal in the Preserve. There had been incidents right after the Preserve was established—Terrans shooting Tlic, shooting N'Tlic. This was before the joining of families began, before everyone had a personal stake in keeping the peace. No one had shot a Tlic in my lifetime or my mother's, but the law still stood—for our protection, we were told. There were stories of whole Terran families wiped out in reprisal back during the assassinations.

I went out to the cages and shot the biggest ahti I could find. It was a handsome breeding male and my mother would not be pleased to see me bring it in. But it was the right size, and I was in a hurry.

I put the ahti's long, warm body over my shoulder—glad that some of the weight I'd gained was muscle—and took it to the kitchen. There, I put the gun back in its hiding place. If T'Gatoi noticed the ahti's wounds and demanded the gun, I would give it to her. Otherwise, let it stay where my father wanted it.

I turned to take the ahti to her, then hesitated. For several seconds, I stood in front of the closed door wondering why I was suddenly afraid. I knew what was going to happen. I hadn't seen it before but T'Gatoi had shown me diagrams, and drawings. She had made sure I knew the truth as soon as I was old enough to understand it.

Yet I did not want to go into that room. I wasted a little time choosing a knife from the carved, wooden box in which my mother kept them. T'Gatoi might want one, I told myself, for the tough, heavily furred hide of the ahti.

"Gan!" T'Gatoi called, her voice harsh with urgency.

I swallowed. I had not imagined a simple moving of the feet could be so difficult. I realized I was trembling and that shamed me. Shame impelled me through the door.

I put the ahti down near T'Gatoi and saw that Lomas was unconscious again. She, Lomas, and I were alone in the room, my mother and sisters probably sent out so they would not have to watch. I envied them.

But my mother came back into the room as T'Gatoi seized the ahti. Ignoring the knife I offered her, she extended claws from several of her limbs and slit the ahti from throat to anus. She looked at me, her yellow eyes intent. "Hold this man's shoulders, Gan."

I stared at Lomas in panic, realizing that I did not want to touch him, let alone hold him. This would not be like shooting an animal. Not as quick, not as merciful, and, I hoped, not as final, but there was nothing I wanted less than to be part of it.

My mother came forward. "Gan, you hold his right side," she said. "I'll hold his left." And if he came to, he would throw her off without realizing he had done it. She was a tiny woman. She often wondered aloud how she had produced, as she said, such "huge" children.

"Never mind," I told her, taking the man's shoulders. "I'll do it."

She hovered nearby.

"Don't worry," I said. "I won't shame you. You don't have to stay and watch."

She looked at me uncertainly, then touched my face in a rare caress. Finally, she went back to her bedroom.

T'Gatoi lowered her head in relief. "Thank you, Gan," she said with courtesy more Terran than Tlic.

"That one... she is always finding new ways for me to make her suffer."

Lomas began to groan and make choked sounds. I had hoped he would stay unconscious. T'Gatoi put her face near his so that he focused on her.

"I've stung you as much as I dare for now," she told him. "When this is over, I'll sting you to sleep and you won't hurt anymore."

"Please," the man begged. "Wait..."

"There's no more time, Bram. I'll sting you as soon as it's over. When T'Khotgif arrives she'll give you eggs to help you heal. It will be over soon."

"T'Khotgif!" the man shouted, straining against my hands.

"Soon, Bram." T'Gatoi glanced at me, then placed a claw against his abdomen slightly to the right of the middle, just below the last rib. There was movement on the right side—tiny, seemingly random pulsations moving his brown flesh, creating a concavity here, a convexity there, over and over until I could see the rhythm of it and knew where the next pulse would be.

Lomas's entire body stiffened under T'Gatoi's claw, though she merely rested it against him as she wound the rear section of her body around his legs. He might break my grip, but he would not break hers. He wept helplessly as she used his pants to tie his hands, then pushed his hands above his head so that I could kneel on the cloth between them and pin them in place. She rolled up his shirt and gave it to him to bite down on.

And she opened him.

His body convulsed with the first cut. He almost tore himself away from me. The sounds he made... I had never heard such sounds come from anything human. T'Gatoi seemed to pay no attention as she lengthened and deepened the cut, now and then pausing to lick away blood. His blood vessels contracted, reacting to the chemistry of her saliva, and the bleeding slowed.

I felt as though I were helping her torture him, helping her consume him. I knew I would vomit soon, didn't know why I hadn't already. I couldn't possibly last until she was finished.

She found the first grub. It was fat and deep red with his blood—both inside and out. It had already eaten its own egg case, but apparently had not yet begun to eat its host. At this stage, it would eat any flesh except its mother's. Let alone, it would have gone on excreting the goisons that had both sickened and alerted Lomas. Eventually it would have begun to eat. By the time it ate its way out of Lomas's flesh, Lomas would be dead or dying—and unable to take a revenge on the thing that was killing him. There was always a grace period between the time the host sickened and the time the grubs began to eat him.

T'Gatoi picked up the writhing grub carefully, and looked at it, somehow ignoring the terrible groans of the man.

Abruptly, the man lost consciousness.

"Good." T'Gatoi looked down at him. "I wish you Ter-rans could do that at will." She felt nothing. And the thing she held...

It was limbless and boneless at this stage, perhaps fifteen centimeters long and two thick, blind and slimy with blood. It was like a large worm. T'Gatoi put it into the belly of the ahti, and it began at once to burrow. It would stay there and eat as long as there was anything to eat.

Probing through Lomas's flesh, she found two more, one of them smaller and more vigorous. "A male!" she said hap-pily. He would be dead before I would. He would be through his metamorphosis and screwing everything that would hold still before his sisters even had limbs. He was the only one to make a serious effort to bite T'Gatoi as she placed him in the ahti.



Paler worms oozed to visibility in Lomas's flesh. I closed my eyes. It was worse than finding something dead, rotting, and filled with tiny animal grubs. And it was far worse than any drawing or diagram.

"Ah, there are more," T'Gatoi said, plucking out two long, thick grubs. "You may have to kill another animal, Gan. Everything lives inside you Terrans."

I had been told all my life that this was a good and necessary thing Tlic and Terran did together—a kind of birth. I had believed it until now. I knew birth was painful and bloody, no matter what. But this was something else, some-thing worse. And I wasn't ready to see it. Maybe I never would be. Yet I couldn't *not* see it. Closing my eyes didn't help.

T'Gatoi found a grub still eating its egg case. The remains of the case were still wired into a blood vessel by their own little tube or hook or whatever. That was the way the grubs were anchored and the way they fed. They took only blood until they were ready to emerge. Then they ate their stretched, elastic egg cases. Then they ate their hosts.

T'Gatoi bit away the egg case, licked away the blood. Did she like the taste? Did childhood habits die hard—or not die at all?

The whole procedure was wrong, alien. I wouldn't have thought anything about her could seem alien to me.

"One more, I think," she said. "Perhaps two. A good family. In a host animal these days, we would be happy to find one or two alive." She glanced at me. "Go outside, Gan, and empty your stomach. Go now while the man is unconscious."

I staggered out, barely made it. Beneath the tree just beyond the front door, I vomited until there was nothing left to bring up. Finally, I stood shaking, tears streaming down my face. I did not know why I was crying but I could not stop. I went farther from the house to avoid being seen. Every time I closed my eyes I saw red worms crawling over redder human flesh.

There was a car coming toward the house. Since Terrans were forbidden motorized vehicles except for certain farm equipment, I knew this must be Lomas's Tlic with Qui and perhaps a Terran doctor. I wiped my face on my shirt, struggled for control.

"Gan," Qui called as the car stopped. "What happened?" He crawled out of the low, round, Tlic-convenient car door. Another Terran crawled out the other side and went into the house without speaking to me. The doctor. With his help and a few eggs, Lomas might make it.

"T'Khotgif Teh?" I said.

The Tlic driver surged out of her car, reared up half her length before me. She was paler and smaller than T'Gatoi—probably born from the body of an animal. Tlic from Terran bodies were always larger as well as more numerous.

"Six young," I told her. "Maybe seven, all alive. At least one male."

"Lomas?" she said harshly. I liked her for the question and the concern in her voice when she asked it. The last coherent thing he had said was her name.

"He's alive," I said.

She surged away to the house without another word.

"She's been sick," my brother said, watching her go. "When I called, I could hear people telling her she wasn't well enough to go out even for this."

I said nothing. I had extended courtesy to the Tlic. Now I didn't want to talk to anyone. I hoped he would go in—out of curiosity if nothing else.

"Finally found out more than you wanted to know, eh?"

I looked at him.

"Don't give me one of *her* looks," he said. "You're not her. You're just her property."

One of her looks. Had I picked up even an ability to imitate her expressions?

"What'd you do, puke?" He sniffed the air. "So now you know what you're in for."

I walked away from him. He and I had been close when we were kids. He would let me follow him around when I was home and sometimes T'Gatoi would let me bring him along when she took me into the city. But something had happened when he reached adolescence. I never knew what. He began keeping out of T'Gatoi's way. Then he began running away—until he realized there was no "away." Not in the Preserve. Certainly not outside. After that he concentrated on getting his share of every egg that came into the house, and on looking out for me in a way that made me all but hate him—a way that clearly said, as long as I was all right, he was safe from the Tlic.

"How was it, really?" he demanded, following me.

"I killed an *achti*. The young ate it."

"You didn't run out of the house and puke because they ate an *achti*."

"I had... never seen a person cut open before." That was true, and enough for him to know. I couldn't talk about the other. Not with him.

"Oh," he said. He glanced at me as though he wanted to say more, but he kept quiet.

We walked, not really headed anywhere. Toward the back, toward the cages, toward the fields.

"Did he say anything?" Qui asked. "Lomas, I mean."

Who else would he mean? "He said 'T'Khotgif.'"

Qui shuddered. "If she had done that to me, she'd be the last person I'd call for."

"You'd call for her. Her sting would ease your pain with-out killing the grubs in you."

"You think I'd care if they died?"

No. Of course he wouldn't. Would I?

"Shit!" He drew a deep breath. "I've seen what they do. You think this thing with Lomas was bad? It was nothing."

I didn't argue. He didn't know what he was talking about.

"I saw them eat a man," he said.

I turned to face him. "You're lying!"

"/ *saw them eat a man*." He paused. "It was when I was little. I had been to the Hartmund house and I was on my way home. Halfway here, I saw a man and a Tlic and the man was N'Tlic. The ground was hilly. I was able to hide from them and watch. The Tlic wouldn't open the man because she had nothing to feed the grubs. The man couldn't go any farther and there were no houses around. He was in so much pain he told her to kill him. He begged her to kill him. Finally, she did. She cut his throat. One swipe of one claw. I saw the grubs eat their way out, then burrow in again, still eating."

His words made me see Lomas's flesh again, parasitized, crawling. "Why didn't you tell me that?" I whispered.

He looked startled, as though he'd forgotten I was listen-ing. "I don't know."

"You started to run away not long after that, didn't you?"

"Yeah. Stupid. Running inside the Preserve. Running in a cage."

I shook my head, said what I should have said to him long ago. "She wouldn't take you, Qui. You don't have to worry."

"She would... if anything happened to you."

"No. She'd take Xuan Hoa. Hoa... wants it." She wouldn't if she had stayed to watch Lomas.

"They don't take women," he said with contempt.

"They do sometimes." I glanced at him. "Actually, they prefer women. You should be around them when they talk among themselves. They say women have more body fat to protect the grubs. But they usually take men to leave the women free to bear their own young."

"To provide the next generation of host animals," he said, switching from contempt to bitterness.

"It's more than that!" I countered. Was it?

"If it were going to happen to me, I'd want to believe it was more, too."

"It *is* more!" I felt like a kid. Stupid argument.

"Did you think so while T'Gatoi was picking worms out of that guy's guts?"

"It's not supposed to happen that way."

"Sure it is. You weren't supposed to see it, that's all. And his Tlic was supposed to do it. She could sting him uncon-scious and the operation wouldn't have been as painful. But she'd still open him, pick out the grubs, and if she missed even one, it would poison him and eat him from the inside out."

There was actually a time when my mother told me to show respect for Qui because he was my older brother. I walked away, hating him. In his way, he was gloating. He was safe and I wasn't. I could have hit him, but I didn't think I would be able to stand it when he refused to hit back, when he looked at me with contempt and pity.

He wouldn't let me get away. Longer-legged, he swung ahead of me and made me feel as though I were following him.

"I'm sorry," he said.

I strode on, sick and furious.

"Look, it probably won't be that bad with you. T'Gatoi likes you. She'll be careful."

I turned back toward the house, almost running from him.

"Has she done it to you yet?" he asked, keeping up easily. "I mean, you're about the right age for implantation. Has she—"

I hit him. I didn't know I was going to do it, but I think I meant to kill him. If he hadn't been bigger and stronger, I think I would have.

He tried to hold me off, but in the end, had to defend himself. He only hit me a couple of times. That was plenty. I don't remember going down, but when I came to, he was gone. It was worth the pain to be rid of him.

I got up and walked slowly toward the house. The back was dark. No one was in the kitchen. My mother and sisters were sleeping in their bedrooms—or pretending to.

Once I was in the kitchen, I could hear voices—Tlic and Terran from the next room. I couldn't make out what they were saying—didn't want to make it out.

I sat down at my mother's table, waiting for quiet. The table was smooth and worn, heavy and

well-crafted. My father had made it for her just before he died. I remembered hanging around underfoot when he built it. He didn't mind. Now I sat leaning on it, missing him. I could have talked to him. He had done it three times in his long life. Three clutches of eggs, three times being opened and sewed up. How had he done it? How did anyone do it?

I got up, took the rifle from its hiding place, and sat down again with it. It needed cleaning, oiling.

All I did was load it.

"Gan?"

She made a lot of little clicking sounds when she walked on bare floor, each limb clicking in succession as it touched down. Waves of little clicks.

She came to the table, raised the front half of her body above it, and surged onto it. Sometimes she moved so smoothly she seemed to flow like water itself. She coiled herself into a small hill in the middle of the table and looked at me.

"That was bad," she said softly. "You should not have seen it. It need not be that way."

"I know."

"T'Khotgif—Ch'Khotgif now—she will die of her disease. She will not live to raise her children. But her sister will provide for them, and for Bram Lomas." Sterile sister. One fertile female in every lot. One to keep the family going. That sister owed Lomas more than she could ever repay.

"He'll live then?"

"Yes."

"I wonder if he would do it again."

"No one would ask him to do that again."

I looked into the yellow eyes, wondering how much I saw and understood there, and how much I only imagined. "No one ever asks us," I said. "You never asked me."

She moved her head slightly. "What's the matter with your face?"

"Nothing. Nothing important." Human eyes probably wouldn't have noticed the swelling in the darkness. The only light was from one of the moons, shining through a window across the room.

"Did you use the rifle to shoot the ahti?"

"Yes."

"And do you mean to use it to shoot me?"

I stared at her, outlined in moonlight—coiled, graceful body. "What does Terran blood taste like to you?"

She said nothing.

"What are you?" I whispered. "What are we to you?"

She lay still, rested her head on her topmost coil. "You know me as no other does," she said softly. "You must decide."

"That's what happened to my face," I told her.

"What?"

"Qui goaded me into deciding to do something. It didn't turn out very well." I moved the gun slightly, brought the barrel up diagonally under my own chin. "At least it was a decision I made."

"As this will be."

"Ask me, Gatoi."

"For my children's lives?"

She would say something like that. She knew how to manipulate people, Terran and Tlic. But not this time.

"I don't want to be a host animal," I said. "Not even yours."

It took her a long time to answer. "We use almost no host animals these days," she said. "You know that."

"You use us."

"We do. We wait long years for you and teach you and join our families to yours." She moved restlessly. "You know you aren't animals to us."

I stared at her, saying nothing.

"The animals we once used began killing most of our eggs after implantation long before your ancestors arrived," she said softly. "You know these things, Gan. Because your people arrived, we are relearning what it means to be a healthy, thriving people. And your ancestors, fleeing from their home world, from their own kind who would have killed or enslaved them—they survived because of us. We saw them as people and gave them the Preserve when they still tried to kill us as worms."

At the word "worms" I jumped. I couldn't help it, and she couldn't help noticing it.

"I see," she said quietly. "Would you really rather die than bear my young, Gan?"

I didn't answer.

"Shall I go to Xuan Hoa?"

"Yes!" Hoa wanted it. Let her have it. She hadn't had to watch Lomas. She'd be proud... Not terrified.

T'Gatoi flowed off the table onto the floor, startling me almost too much.

"I'll sleep in Hoa's room tonight," she said. "And some-time tonight or in the morning, I'll tell her."

This was going too fast. My sister. Hoa had had almost as much to do with raising me as my mother. I was still close to her—not like Qui. She could want T'Gatoi and still love me.

"Wait! Gatoi!"

She looked back, then raised nearly half her length off the floor and turned it to face me. "These are adult things, Gan. This is my life, my family!"

"But she's... my sister."

"I have done what you demanded. I have asked you!"

"But—"

"It will be easier for Hoa. She has always expected to carry other lives inside her."

Human lives. Human young who would someday drink at her breasts, not at her veins.

\* I shook my head. "Don't do it to her, Gatoi." I was not Qui. It seemed I could become him, though, with no effort at all. I could make Xuan Hoa my shield. Would it be easier to know that red worms were growing in her flesh instead of mine?

"Don't do it to Hoa," I repeated.

She stared at me, utterly still.

I looked away, then back at her. "Do it to me."

I lowered the gun from my throat and she leaned forward to take it.

"No," I told her.

"It's the law," she said.

"Leave it for the family. One of them might use it to save my life someday."

She grasped the rifle barrel, but I wouldn't let go. I was pulled into a standing position over her.

"Leave it here!" I repeated. "If we're not your animals, if these are adult things, accept the risk. There is risk, Gatoi, in dealing with a partner."

It was clearly hard for her to let go of the rifle. A shudder went through her and she made a hissing sound of distress. It occurred to me that she was afraid. She was old enough to have seen what guns could do to people. Now her young and this gun would be together in the same house. She did not know about our other guns. In this dispute, they did not matter.

"I will implant the first egg tonight," she said as I put the gun away. "Do you hear, Gan?"

Why else had I been given a whole egg to eat while the rest of the family was left to share one? Why else had my mother kept looking at me as though I were going away from her, going where she could not follow? Did T'Gatoi imagine I hadn't known?

"I hear."

"Now!" I let her push me out of the kitchen, then walked ahead of her toward my bedroom. The sudden urgency in her voice sounded real. "You would have done it to Hoa to-night!" I accused.

"I must do it to someone tonight."

I stopped in spite of her urgency and stood in her way. "Don't you care who?"

She flowed around me and into my bedroom. I found her waiting on the couch we shared. There was nothing in Hoa's room that she could have used. She would have done it to Hoa on the floor. The thought of her doing it to Hoa at all disturbed me in a different way now, and I was suddenly angry.

Yet I undressed and lay down beside her. I knew what to do, what to expect. I had been told all my life. I felt the familiar sting, narcotic, mildly pleasant. Then the blind prob-ing of her ovipositor. The puncture was painless, easy. So easy going in. She undulated slowly against me, her muscles forcing the egg from her body into mine. I held on to a pair of her limbs until I remembered Lomas holding her that way. Then I let go, moved inadvertently, and hurt her. She gave a low cry of pain and I expected to be caged at once within her limbs. When I wasn't, I held on to her again, feeling oddly ashamed.

"I'm sorry," I whispered.

She rubbed my shoulders with four of her limbs.

"Do you care?" I asked. "Do you care that it's me?"

She did not answer for some time. Finally, "You were the one making choices tonight, Gan. I made mine long ago."

"Would you have gone to Hoa?"

"Yes. How could I put my children into the care of one who hates them?"

"It wasn't... hate."

"I know what it was."

"I was afraid."

Silence.

"I still am." I could admit it to her here, now.

"But you came to me... to save Hoa."

"Yes." I leaned my forehead against her. She was cool velvet, deceptively soft. "And to keep you for myself," I said. It was so. I didn't understand it, but it was so.

She made a soft hum of contentment. "I couldn't believe I had made such a mistake with you," she said. "I chose you. I believed you had grown to choose me."

"I had, but..."

"Lomas."

"Yes."

"I have never known a Terran to see a birth and take it well. Qui has seen one, hasn't he?"

"Yes."

"Terrans should be protected from seeing."

I didn't like the sound of that—and I doubted that it was possible. "Not protected," I said. "Shown. Shown when we're young kids, and shown more than once. Gatoi, no Terran ever sees a birth that goes right. All we see is N'Tlic— pain and terror and maybe death."

She looked down at me. "It is a private thing. It has always been a private thing."

Her tone kept me from insisting—that and the knowledge that if she changed her mind, I might be the first public example. But I had planted the thought in her mind. Chances were it would grow, and eventually she would experiment.

"You won't see it again," she said. "I don't want you thinking any more about shooting me."

The small amount of fluid that came into me with her egg relaxed me as completely as a sterile egg would have, so that I could remember the rifle in my hands and my feelings of fear and revulsion, anger and despair. I could remember the feelings without reviving them. I could talk about them.

"I wouldn't have shot you," I said. "Not you." She had been taken from my father's flesh when he was my age.

"You could have," she insisted.

"Not you." She stood between us and her own people, protecting, interweaving.

"Would you have destroyed yourself?"

I moved carefully, uncomfortably. "I could have done that. I nearly did. That's Qui's 'away.' I wonder if he knows."

"What?"

I did not answer.

"You will live now."

"Yes." *Take care of her*, my mother used to say. Yes.

"I'm healthy and young," she said. "I won't leave you as Lomas was left—alone, N'Tlic. I'll take care of you."

**TROJAN HORSE** Michael Swanwick

*Science fiction is for the most part a literature of rationalism, but this has never prevented its writers from speculating about matters that go beyond scientific knowledge. The subject of God turns up in a large number of thoughtful stories, from Arthur C. Clarke's "The Star" to Walter M. Miller's A Canticle for Leibowitz... and now in this intense novelette about human-computer interfacing on a future space station.*

*Michael Swanwick's short fiction has often been nominated for awards, and his first novel. In the Drift, was published early this year.*

"It's all inside my head," Elin said wonderingly. It was true. A chimney swift flew overhead, and she could feel its passage through her mind. A firefly landed on her knee. It pulsed cold fire, then spread its wings and was gone, and that was a part of her, too.

"Please try not to talk too much." The wetware tech tightened a cinch on the table\* adjusted a bone inductor. His red and green facepaint loomed over her, then receded. "This will go much faster if you cooperate."

Elin's head felt light and airy. It was *huge*. It contained all of Magritte, from the uppermost terrace down through the office levels to the trellis farms that circled the inner lake. Even the blue and white Earth that hovered just over one rock wall. They were all within her. They were all, she realized, only a model, the picture her mind assembled from sensory input. The exterior universe—the *real* universe—lay beyond.

"I feel giddy."

"Contrast high." The tech's voice was neutral. "This is a different mode of perception from what you're used to—you're stoned on the novelty."

A catwalk leading into the nearest farm rattled within Elin's mind as a woman in agricultural blues strode by, burlap gourd-collecting bag swinging from her hip. It was night outside the crater but biological day within, and the agtechs had activated tiers of arc lights at the cores of the farms. Filtered by greenery, the light was soft and watery.

"I could live like this forever."

"Believe me, you'd get bored." A rose petal fell softly on her cheek, and the tech brushed it off. He turned to face the two lawyers who stood silently nearby, waiting. "Are the legal preliminaries finished now?"

The lawyer in orangeface nodded. The one in purple said, "Can't her original personality be restored at all?"

Drawing a briefcase from his pocket, the wet ware tech threw up a holographic diagram between himself and the witnesses. The air filled with intricate three-dimensional trac-ery, red and green lines interweaving and meshing.

"We've mapped the subject's current personality." He reached out to touch several junctions. "You will note that here, here, and *here* we have what are laughingly referred to as impossible emotional syllogisms. Any one of these renders the subject incapable of survival."

A thin waterfall dropped from the dome condensers to a misty pool at the topmost terrace, a bright razor slash through reality. It meandered to the edge of the next terrace and fell again.

"A straight yes or no will suffice."



The tech frowned. "In theory., yes. In practical terms, it's hopeless. Remember, her personality was never recorded. The accident almost completely randomized her emotional structure—technically she's not even human. Given a decade or two of extremely delicate memory probing, we could *maybe* construct a facsimile. But it would only resemble the original; it could never be the primary Elin Donnelly."

Elin could dimly make out the equipment for five more waterfalls, but they were not in operation at the moment. She wondered why.

The attorney made a rude noise. "Well then, go ahead and do it. I wash my hands of this whole mess."

The tech bent over Elin to reposition a bone inductor. "This won't hurt a bit," he promised. "Just pretend that you're at the dentist's, having your teeth replaced."

She ceased to exist.

The new Elin Donnelly gawked at everything—desk work-ers in their open-air offices, a blacksnake sunning itself by the path, the stone stairs cut into the terrace walls. Her lawyer led her through a stand of saplings no higher than she and into a meadow.

Butterflies scattered at their approach. Her gaze went from them to a small cave in the cliffs ahead, then up to the stars, as jumpy and random as the butterflies' flight.

"—So you'll be stuck on the moon for a full lunation— almost a month—if you want to collect your settlement. I. G. Feuchtwaren will carry your expenses until then, drawing against their final liability. Got that?"

And then—suddenly, jarringly—Elin could *focus* again. She took a deep breath. "Yes," she said. "Yes, I—okay."

"Good." The attorney canceled her judicial-advisory wetware, yanking the skull plugs and briskly wrapping them around her briefcase. "Then let's have a drink—it's been a long day."

They had arrived at the cave. "Hey, Hans!" the lawyer shouted. "Give us some service here, will you?"

A small man with the roguish face of a comic-opera troll popped into the open, work terminal in hand. "One minute," he said. "I'm on direct flex time—got to wrap up what I'm working on first."

"Okay." The lawyer sat down on the grass. Elin watched, fascinated, as the woman toweled the paint from her face, and a new pattern of fine red and black lines, permanently tattooed into her skin, emerged.

"Hey!" Elin said. "You're a Jesuit."

"You expected IGF to ship you a lawyer from Earth orbit?" She stuck out a hand. "Donna Landis, S.J. I'm the client overseer for the Star Maker project, but I'm also avail-able for spiritual guidance. Mass is at nine, Sunday mornings."

Elin leaned back against the cliff. Grapevines rustled under her weight. Already she missed the blissed-out feeling of a few minutes before. "Actually, I'm an agnostic."

"You were. Things may have changed." Landis folded the towel into one pocket, unfolded a mirror from another. "Speak-ing of which, how do you like your new look?"

Elin studied her reflection. Blue paint surrounded her eyes, narrowing to a point at the bridge of her nose, swooping down in a long curve to the outside. It was as if she were peering through a large, blue moth or a pair of hawk wings.

There was something magical about it, something glamorous, something very unlike her.

"I feel like a raccoon. This idiot mask."

"Get used to it. You'll be wearing it a lot."

"But what's the point?" Elin was surprised by her own irritation. "So I've got a new personality; it's still *me* in here. I don't feel any weird compulsion to run amok with a knife or walk out an airlock without a suit. Nothing to warn the citizenry about, certainly."

"Listen," Landis said. "Right now you're like a puppy tripping over its own paws because they're too big for it. You're a stranger to yourself—you're going to feel angry when you don't expect to, get sentimental over surprising things. You can't control your emotions until you learn what they are. And until then, the rest of us deserve—"

"What'll you have?" Hans was back, his forehead smudged black where he had incompletely wiped off his facepaint.

"—a little warning. Oh, I don't know, Hans. Whatever you have on tap."

"That'll be Chanty. You?" he asked Elin.

"What's good?"

He laughed. "There's no such thing as a *good* lunar wine. The air's too moist. And even if it weren't, it takes a good century to develop an adequate vineyard. But the Chanty is your basic, drinkable glug."

"I'll take that, then."

"Good. I'll bring a mug for your friend, too."

"My friend?" She turned and saw a giant striding through the trees, towering over them, pushing them apart with two enormous hands. For a dizzy instant, she goggled in disbelief, and then the man shrank to human stature as she remembered the size of the saplings.

He grinned. "Hi. Remember me?"

He was a tall man, but like a spacejack, lean and angular. An untidy mass of black curls framed a face that was not quite handsome but carried an intense freight of will.

"I'm afraid..."

"Tory Shostakovich. I reprogrammed you."

She studied his face carefully. Those eyes. They were fierce almost to the point of mania, but there was sadness there, too, and—she thought she might be making this up—a hint of pleading, like a little boy who wants something so desperately he dare not ask for it. She could lose herself in analyzing the nuances of those eyes. "Yes," she said at last, "I remember you now."

"I'm pleased." He nodded to the Jesuit. "Father Landis."

She eyed him skeptically. "You don't seem your usual morose self, Shostokovich. Is anything wrong?"

"No, it's just a special kind of morning." He smiled at some private joke, returned his attention to Elin. "I thought I'd drop by and get acquainted with my former patient." He glanced down at the ground, fleetingly shy, and then his eyes were bright and audacious again.

*How charming*, Elin thought. She hoped that he wasn't *too* shy. And then she had to glance away herself, the thought was so unlike her. "So you're a wetware surgeon," she said inanely.

Hans reappeared to distribute mugs of wine, then retreated to the cave's mouth. He sat down, workboard in lap, and patched in the skull-plugs. His face went stiff as the wetware took hold.

"Actually," Tory said, "I very rarely work as a wetsurgeon. An accident like yours is rare, you know—maybe once, twice a year. Mostly I work in wetware development. Currently I'm on the Star Maker project."

"I've heard that name before. Just what *is* it anyway?"

Tory didn't answer immediately. He stared down into the lake, a cool breeze from above ruffling his curls. Elin caught her breath. / *hardly know this man*, she thought wildly. He pointed to the island in the center of the lake, a thin, stony finger that was originally the crater's thrust cone.

"God lives on that island," he said.

Elin laughed. "Think how different history would be if He'd only had a sense of direction!" She wanted to bite her tongue when she realized that he was not joking.

"You're being cute, Shostokovich," Landis warned. She swigged down a mouthful of wine. "*Jeez*, that's vile stuff."

Tory rubbed the back of his neck ruefully. "*Mea culpa*. Well, let me give you a little background. Most people think of wetware as being software for people. But that's too simplistic, because with machines you start out blank—with a clean slate—and with people, there's some ten million years of mental programming already crammed into their heads.

"So to date we've been working *with* the natural wetware.

We counterfeit surface traits—patience, alertness, creativity—and package them like so many boxes of bonemeal. But the human mind is vast and unmapped, and it's time to move into the interior, for some basic research.

"That's the Star Maker project. It's an exploration of the basic substructural programming of the mind. We've redefined the overstructure programs into an integrated system we believe will be capable of essence-programming, in one-to-one congruence with the inherent substructure of the universe."

"What jargonistic rot!" Landis gestured at Elin's stone-ware mug. "Drink up. The Star Maker is a piece of experimental theology that IGF dreamed up. As Tory said, it's basic research into the nature of the mind. The Vatican Synod is providing funding so we can keep an eye on it."

"Nipping heresy in the bud," Tory said sourly.

"That's a good part of it. This set of wetware will supposedly reshape a human mind into God. Bad theology, but there it is. They want to computer-model the infinite. Anyway, the specs were drawn up, and it was tried out on—what was the name of the test subject?"

"Doesn't matter," Tory said quickly.

"Coral something-or-other."

Only half-listening by now, Elin unobtrusively studied Tory. He sat, legs wide, staring into his mug of Chanty. There were hard lines on his face, etched by who knew what experiences. / *don't believe in love at first sight*, Elin thought. Then again, who knew *what* she might believe in anymore? It was a chilling thought, and she retreated from it.

"So did this Coral become God?"

"Patience. Anyway, the volunteer was plugged in, wiped, reprogrammed, and interviewed. Nothing useful."

"In one hour," Tory said, "we learned more about the structure and composition of the universe than in all of history to date."

"It was deranged gibberish." Landis tapped Elin's knee. "We interviewed her and then canceled the wetware. And what do you think happened?"

"I've never been big on rhetorical questions." Elin didn't take her eyes off Tory.

"She didn't come down. She was stuck."

"Stuck?"

Tory plucked a blade of grass, let it fall. "What happened was that we had rewired her to absolute consciousness. She was not only aware of all her mental functions but in control of them—right down to the involuntary reflexes, which also put her in charge of her own metaprogrammer."

"*Metaprogrammer* is just a buzzword for a bundle of reflexes the brain uses to make changes in itself," Landis threw in.

"Yeah. What we didn't take into account, though, was that she'd *like* being God. When we tried deprogramming her, she simply overrode our instructions and reprogrammed herself back up."

"The poor woman," Elin said. *And yet—what a glorious experience to be God!* Something within her thrilled to it. *It would almost be worth the price.*

"Which leaves us with a woman who thinks she's God," Landis said. "I'm just glad we were able to hush it up. If word got out to some of those religious illiterates back on Earth—"

"Listen," Tory said. "I didn't really come here to talk shop. I wanted to invite my former patient on a grand tour of the Steam Grommet Works."

Elin looked at him blankly. "Steam..."

He swept an arm to take in all of Margritte, the green pillars and gray cliffs alike. There was something proprietary in his gesture.

Landis eyed him suspiciously. "You two might need a chaperone," she said. "I think I'll tag along to keep you out of trouble."

Elin smiled sweetly. "Fuck off," she said.

Ivy covered Tory's geodesic trellis hut. He led the way in, stooping to touch a keyout by the doorway. "Something classical?"

"Please." As he began removing her jumpsuit, the holotape sprang into being, surrounding them with rich reds and cobalt blues that coalesced into stained-glass patterns in the air. Elin pulled back and clapped her hands. "It's Chartres," she cried, delighted. "The cathedral at Chartres!"

"Mmmmm." Tory teased her down onto the grass floor.

The north rose swelled to fill the hut. It was all angels and doves, kings and prophets, with gold lilies surrounding the central rosette. Deep and powerful, infused with gloomy light, it lap-dissolved into the lancet of Saint Anne.

The windows wheeled overhead as the holotape panned down the north transept to the choir, to the apse, and then up into the ambulatory. Swiftly, then, it cut to the wounded Christ and the Beasts of Revelation set within the dark spaces of the west rose. The outer circle—the instruments of the Passion—closed about them.

Elin gasped.

The tape moved down the nave, still brightening, briefly pausing at the Vendome chapel. Until finally the oldest win-dow, the Notre Dame de la Belle Verriere, blazed in a frenzy of raw glory. A breeze rattled the ivy, and two leaves fell through the hologram to tap against their skin and slide to the ground.

The Belle Verriere faded in the darkening light, and the colors ran and were washed away by a noiseless gust of rain.

Elin let herself melt into the grass, drained and lazy, not caring if she never moved again. Beside her Tory chuckled, playfully tickled her ribs. "Do you love me? Hey, tell me you love me."

"Stop!" She grabbed his arms and bit him in the side—a small, nipping bite, more threat than

harm—ran a tongue over his left nipple. "Hey, listen, I hit the sack with you a half hour after we met. What do you want?"

"Want?" He broke her hold, rolled over on top of her, pinioning her wrists above her head. "I want you to know"—and suddenly he was absolutely serious, his eyes unblinking and glittery hard—"that I love you. Without doubt or qualification. I love you more than words could ever say."

"Tory," she said. "Things like that take time." The wind had died down. Not a blade of grass stirred.

"No they don't." It was embarrassing looking into those eyes; she refused to look away. "I feel it. I *know* it. I love every way, shape, and part of you. I love you beyond time and barrier and possibility. We were meant to be lovers, fated for it, and there is *nothing*, absolutely nothing, that could ever keep us apart." His voice was low and steady. Elin couldn't tell whether she was thrilled or scared out of her wits.

"Tory, I don't know—"

"Then wait," he said. "It'll come."

\* \* \*

Lying sleepless beside Tory that night, Elin thought back to her accident. And because it was a matter of stored memory, the images were crisp and undamaged.

It happened at the end of her shift on Wheel Laboratory 19, Henry Ford Orbital Industrial Park.

Holding theta lab flush against the hub cylinder, Elin injected ferrous glass into a molten copper alloy. Simultaneously, she plunged gamma lab a half kilometer to the end of its arm, taking it from fractional Greenwich normal to a full nine gravities. Epsilon began crawling up its spindly arm. Using waldos, she lifted sample wafers from the quick-freeze molds in omicron. There were a hundred measurements to be made.

Elin felt an instant's petulant boredom, and the workboard readjusted her wetware, jacking up her attentiveness so that she leaned over her readouts in cool, detached fascination.

The workboard warned her that the interfacing program was about to be shut off. Her fingers danced across the board, damping down reactions, putting the labs to bed. The wetware went quiescent.

With a shiver, Elin was herself again. She grabbed a towel and wiped off her facepaint. Then she leaned back and transluced the wall—her replacement was late. Corporation regs gave her fifty percent of his missed-time fines if she turned him in. It was easy money, and so she waited.

Stretching, she felt the gold wetware wires dangling from the back of her skull. She lazily put off yanking them.

Earth bloomed underfoot, slowly crept upward. New Detroit and New Chicago rose from the floor. Bright industrial satellites gleamed to every side of the twin residential cylinders.

A bit of motion caught Elin's eye, and she swiveled to follow a load of cargo drifting by. It was a jumble of containers lashed together by nonmagnetic tape and shot into an orbit calculated to avoid the laser cables and power transmission beams that interlaced the park.

A man was riding the cargo, feet braced against a green carton, hauling on a rope slipped through the lashings. He saw her and waved. She could imagine his grin through the mirrored helmet.

The old Elin snorted disdainfully. She started to look away and almost missed seeing it happen.

In leaning back that fraction more, the cargo hopper had put too much strain on the lashings. A faulty rivet popped, and the cargo began to slide. Brightly colored cartons drifted apart, and the man went tumbling, end over end, away.

One end of the lashing was still connected to the anchor carton, and the free end writhed like a wounded snake. A bright bit of metal—the failed rivet—broke free and flew toward the juncture of the wheel lab's hub and spokes.

The old Elin was still hooting with scornful laughter when the rivet struck the lab, crashing into a nest of wiring that *should not have* been exposed.

Two wires short-circuited, sending a massive power transient surging up through the workboard. Circuits fused and melted. The board went haywire.

And a microjolt of electricity leaped up two gold wires, hopelessly scrambling the wetware through Elin's skull.

An hour later, when her replacement finally showed, she was curled into a ball, rocking back and forth on the floor. She was alternating between hysterical gusts of laughter and dark, gleeful screams.

Morning came, and after a sleepy, romantic breakfast, Tory plugged into his briefcase and went to work. Elin wandered off to do some thinking.

There was no getting around the fact that she was *not* the metallurgist from Wheel Lab 19, not anymore. That woman was alien to her now. They shared memories, experiences— but she no longer understood that woman, could not sympathize with her emotions, indeed found her distasteful.

At a second-terrace cafe that was crowded with off-shift biotechs, Elin rented a table and briefcase. She sat down to try to trace the original owner of her personality.

As she'd suspected, her new persona was copied from that of a real human being; creating a personality from scratch was still beyond the abilities of even the best wetware techs. She was able to trace herself back to IGF's inventory bank and to determine that duplication of personality was illegal—which presumably meant that the original owner was dead.

But she could not locate the original owner. Selection had been made by computer, and the computer wouldn't tell. When she tried to find out, it referred her to the Privacy Act of 2037.

"I think I've exhausted all the resources of self-discovery available to me," she told the Pierrot when he came to collect his tip. "And I've still got half the morning left to kill."

He glanced at her powder-blue facepaint and smiled politely.

"It's selective black."

"Huh?" Elin turned away from the lake, found that an agtech carrying a long-handled net had come up behind her.

"The algae—it absorbs light into the infrared. Makes the lake a great thermal sink." The woman dipped her net into the water, seined up a netful of dark-green scum, and dumped it into a nearby trough. Water drained away through the porous bottom.

"Oh." There were a few patches of weeds on the island, where drifting soil had settled. "It's funny. I never used to be very touristy. More the contemplative type, sort of homebodyish. Now I've got to be *doing* something, you know?"

The agtech dumped another load of algae into the trough. "I couldn't say." She tapped her forehead. "It's the wetware. If you want to talk shop, that's fine. Otherwise, I can't."

"I see." Elin dabbed a toe in the warm water. "Well, why not? Let's talk shop."

Someone was moving at the far edge of the island. Elin craned her neck to see. The agtech went on methodically dipping her net into the lake as God walked into view.

"The lake tempers the climate, see? By day it works by evaporative cooling. Absorbs the heat, loses

it to evaporation, radiates it out the dome roof through the condensers."

Coral was cute as a button.

A bowl of fruit and vegetables had been left near the waterline. She walked to the bowl, considered it. Her orange jumpsuit nicely complemented her cafe-au-lait skin. She was so small and delicate that by contrast Elin felt ungainly.

"We also use passive heat pumps to move the excess heat down to a liquid-storage cavern below the lake."

Coral picked up a tomato. Her features were finely chiseled. Her almond eyes should have had snap and fire in them, to judge by the face, but they were remote and unfocused. Even, white teeth nipped at the food.

"At night we pump the heat back up, let the lake radiate it out to keep the crater warm."

On closer examination—Elin had to squint to see so fine—the face was as smooth and lineless as that of an idiot. There was nothing there; no emotion, no purpose, no detectable intellect.

"That's why the number of waterfalls in operation varies."

Now Coral sat down on the rocks. Her feet and knees were dirty. She did not move. Elin wanted to shy a rock at her to see if she would react.

*What now?* Elin wondered. She had seen the sights, all that Magritte had to offer, and they were all tiresome, disappointing. Even—no, make that *especially*—God. And she still had almost a month to kill.

"Keeping the crater tempered is a regular balancing act," the agtech said.

"Oh, shut up." Elin took out her briefcase and called Father Landis. "I'm bored," she said, when the hologram had stabilized.

Landis hardly glanced up from her work. "So get a job," she snapped.

Magritte had begun as a mining colony, back when it was still profitable to process the undifferentiated melange soil. The miners were gone now, and the crater was owned by a consortium of operations legally debarred from locating Earthside.

From the fifteenth terrace Elin stared down at the patch-work clusters of open-air laboratories and offices, some separated by long stretches of undeveloped field, others crammed together in the hope of synergistic effect. Germ-warfare corporations mingled with nuclear-waste engineering firms. The Mid-Asian Population Control Project had half a terrace to itself, and it swarmed with guards. There were a few off-Swiss banking operations.

"You realize," Tory said, "that I'm not going to be at all happy about this development." He stood, face impassive in red and green, watching a rigger bolt together a cot and wire in the surgical equipment.

"You hired me yourself," Elin reminded him.

"Yes, but I'm wired into professional mode at the moment." The rigger packed up his tools, walked off. "Looks like we're almost ready."

"Good." Elin flung herself down on the cot and lay back, hands folded across her chest. "Hey, I feel like I should be holding a lily!"

"I'm going to hook you into the project intercom so you don't get too bored between episodes." The air about her flickered, and a clutch of images overlaid her vision. Ghosts walked through the air, stared at her from deep within the ground. "Now we'll shut off the external senses." The world went away, but the illusory people remained, each within a separate hexagonal field of vision. It was like seeing through

the eyes of a fly.

There was a sudden, overwhelming sense of Tory's presence, and a sourceless voice said to her, "This will take a minute. Amuse yourself by calling up a few friends." Then he was gone.

Elin floated, free of body, free of sensation, almost godlike in her detachment. She idly riffled through the images, stopped at a chubby little man drawing a black line across his forehead. *Hello, Hans*, she thought.

He looked up and winked. "How's it hanging, kid?"

*Not so bad. What're you up to?*

"My job. I'm the black-box monitor this shift." He added an orange starburst to the band, surveyed the job critically in a pocket mirror. "I sit here with my finger on the button"—one hand disappeared below his terminal—"and if I get the word, I push. That sets off explosives in the condenser units and blows the dome. *Pfffft*. Out goes the air."

She considered it: a sudden volcano of oxygen spouting up and across the lunar plains. Human bodies thrown up from the surface, scattering, bursting under explosive decompression.

*That's grotesque, Hans.*

"Oh, it's safe. The button doesn't connect unless I'm wetwired into my job."

*Even so.*

"Just a precaution; a lot of the research that goes on here wouldn't be allowed without this kind of security. Relax—I haven't lost a dome yet."

The intercom cut out, and again Elin felt Tory's presence. "We're trying a Trojan horse program this time—inserting you into the desired mental states instead of making you the states. We've encapsulated your surface identity and routed the experimental programs through a secondary level. So with *this* series, rather than identifying with the programs, you'll perceive them all indirectly."

*Tory, you have got to be the most jargon-ridden human being in existence. How about repeating that in English?*

"I'll show you."

Suddenly Elin was englobed in a sphere of branching crimson lines, dark and dull, that throbbed slowly. Lacy and organic, it looked the way she imagined the veins in her forehead to be like when she had a headache.

"That was anger," Tory said. "Your mind shunted it off into visual imagery because it didn't identify the anger with itself."

*That's what you're going to do then—program me into the God-state so that I can see it but not experience it?*

"Ultimately. Though I doubt you'll be able to come up with pictures. More likely, you'll feel that you're in the presence of God." He withdrew for a moment, leaving her more than alone, almost nonexistent. Then he was back. "We start slowly, though. The first session runs you up to the basic metaprogramming level, integrates all your mental processes, and puts you in low-level control of them. The nontechnical term for this is *making the Christ*. Don't fool around with anything you see or sense."

His voice faded, she was alone, and then everything changed.

She was in the presence of someone wonderful.

Elin felt that someone near at hand, and struggled to open the eyes she no longer possessed; she had to see. Her existence opened, and people began appearing before her.



"Careful," Tory said. "You've switched on the intercom again."

*/ want to see!*

"There's nobody to see. That's just your own mind. But if you want, you can keep the intercom on."

*Oh.* It was disappointing. She was surrounded by love, by a crazily happy sense that the universe was holy, by wisdom deeper than the world. By all rights, it *had* to come from a source greater than herself.

Reason was not sufficiently strong to override emotion. She riffled through the intercom, bringing up image after image and discarding them all, searching.

When she had run through the entire project staff, she began hungrily scanning the crater's public monitors.

Agtechs in the trellis farms were harvesting strawberries and sweet peas. Elin could taste them on her tongue. Somebody was seining up algae from the inner lake, and she felt the weight of the net in callused hands. Not far from where she lay, a couple was making love in a grove of saplings and—

*Tory, I don't think I can take this. It's too intense.*

"You're the test pilot."

*Dammit, Tory!*

Donna Landis materialized on the intercom. "She's right, Shostakovich. You haven't buffered her enough."

"It didn't seem wise to risk dissociative effects by cranking her ego up *too* high."

"Who's paying for all this, hah?"

Tory grumbled something inaudible and dissolved the world.

Elin floated in blackness, soothing and relaxing. She felt good. She had needed this little vacation from the tensions and pressures of her new personality. Taking the job had been the right thing to do, even if it *did* momentarily displease Tory.

Tory... She smiled mentally. He was exasperating at times, but still she was coming to rely on having him around. She was beginning to think she was in love with him.

*A lesser love, perhaps. Certainly not the love that is the Christ.*

Well, maybe so. Still, on a *human* level, Tory filled needs in her she hadn't known existed. It was too much effort to argue with herself, though. Her thoughts drifted away into a wordless, luxurious reveling in the bodiless state, free from distractions, carefree and disconnected.

*Nothing is disconnected. All the universe is a vast net of intermeshing programs.* Elin was amused at herself. That had sounded like something Tory would say. She'd have to watch it; she might love the man, but she didn't want to end up talking like him.

*You worry needlessly. The voice of God is subtle, but it is not your own.*

Elin started. She searched through her mind for an open intercom channel, didn't find one. *Hello*, she thought. *Who said that?*

The answer came to her not in words, but in a sourceless assertion of identity. It was cool, emotionless, something she could not describe even to herself, but by the same token absolute and undeniable.

It was God.

Then Tory was back and the voice, the presence was gone. *Tory?* she thought. */ think I just had a religious experience.*

"That's very common under sensory deprivation—the mind clears out a few old programs. Nothing to worry about. Now relax for a jiff while I plug you back in—how does that feel?"

The presence was back again, but not nearly so strongly as before; she could resist the urge to chase after it. *That's fine, Tory, but listen, I really think—*

"Let's leave analysis to those who have been programmed for it, shall we?"

The lovers strolled aimlessly through a meadow, the grass brushing up higher than their waists. Biological night was coming; the agtechs flicked the daylight switch off and on twice in warning.

"It was *real*, Tory. She talked with me; I'm not making it up."

Tory ran a hand through his dark, curly hair, looking distracted. "Well, assuming that my professional opinion was wrong—and I'll be the first to admit that the program is a bit egocentric—I still don't think we have to stoop to mysticism for an explanation."

To the far side of Magritte, a waterfall was abruptly shut off. The stream of water scattered, seeming to dissolve in the air. "I thought you said she was God."

"I only said that to bait Landis. I don't mean that she's literally God, just *godlike*. Her thought processes are a million years more efficiently organized than ours. God is just a convenient metaphor."

"Um. So what's your explanation?"

"There's at least one terminal on the island—the things are everywhere. She probably programmed it to cut into the intercom without the channels seeming to be open."

"Could she *do* that?"

"Why not? She has that million-year edge on us—and she used to be a wetware tech; all wetware techs are closet computer hacks." He did not look at her, had not looked at her for some time.

"Hey." She reached out to take his hand. "What's *wrong* with you tonight?"

"Me?" He did not meet her eyes. "Don't mind me. I'm just sulking because you took the job. I'll get over it."

"What's wrong with the job?"

"Nothing. I'm just being moody."

She guided his arm around her waist, pressed up against him. "Well, don't be. It's nothing you can control—I *have* to have work to do. My boredom threshold is very low."

"I know that." He finally turned to face her, smiled sadly. "I do love you, you know."

"Well... maybe I love you, too."

His smile banished all sadness from his face, like a sudden wind that breaks apart the clouds. "Say it again." His hands reached out to touch her shoulders, her neck, her face. "One more time, with feeling."

"Will nof!" Laughing, she tried to break away from him, but he would not let go, and they fell in a tangle to the ground. "Beast!" They rolled over and over in the grass. "Brute!" She hammered at his chest, tore open his jumpsuit, tried to bite his neck.

Tory looked embarrassed, tried to pull away. "Hey, not out here! Somebody could be watching."

The agtechs switched off the arc lamps, plunging Magritte into darkness.

Tory reached up to touch Elin's face. They made love.

Physically it was no different from things she had done countless times before with lovers and friends and the occasional stranger. But she was committing herself in a way the old Elin would never have

dared, letting Tory past her defenses, laying herself open to pain and hurt. Trusting him. He was a part of her now. And everything was transformed, made new and wonderful.

Until they were right at the brink of orgasm, the both of them, and half delirious, she could let herself go, murmuring, "I love you, love you, God I love you..." And just as she climaxed, Tory stiffened and threw his head back, and in a voice that was wrenched from the depths of passion, whispered, "Coral..."

Half blind with fury, Elin strode through a residential settlement. The huts glowed softly from the holotapes playing within—diffuse, scattered rainbow patterns unreadable outside their fields of focus. She'd left Tory behind, bewildered, two terraces above.

Elin halted before one hut, stood indecisively. Finally, because she had to talk to *somebody*, she rapped on the lintel.

Father Landis stuck her head out the doorway, blinked sleepily. "Oh, it's you, Donnelly. What do you want?"

To her absolute horror, Elin broke into tears.

Landis emerged, zipping up her jumpsuit. She cuddled Elin in her arms, made soothing noises, listened to her story.

"Coral," Landis said. "Ahhhh. Suddenly everything falls into place."

"Well, I wish you'd tell me, then!" She tried to blink away the angry tears. Her face felt red and raw and ugly; the wet ware paint was all smeared.

"Patience, child." Landis sat down cross-legged beside the hut, patted the ground beside her. "Sit here and pretend that I'm your mommy, and I'll tell you a story."

"Hey, I didn't come here—"

"Who are you to criticize the latest techniques in spiritual nurturing, hey?" Landis chided gently. "Sit."

Elin did so. Landis put an arm about her shoulder.

"Once upon a time, there was a little girl named Coral—I forget her last name. Doesn't matter. Anyway, she was bright and emotional and ambitious and frivolous and just like you in every way." She rocked Elin gently as she spoke.

"Coral was a happy little girl, and she laughed and played, and one day she fell in love. Just like *that!*" She snapped her fingers. "I imagine you know how she felt."

"This is kind of embarrassing."

"Hush. Well, she was very lucky, for as much as she loved him, he loved her a hundred times back, and for as much as he loved her, she loved him a thousand times back. And so it went. I think they overdid it a bit, but that's just my personal opinion.

"Now Coral lived in Magritte and worked as a wetware tech. She was an ambitious one, too—they're the worst kind. She came up with a scheme to reprogram people so they could live *outside* the programs that run them in their every day lives. Mind you, people are more than the sum of their programming, but what did she know about free will? She hadn't had any religious training, after all. So she and her boyfriend wrote up a proposal and applied for funding, and together they ran the new program through her skull. And when it was all done, she thought she was God. Only she wasn't Coral anymore—not so as you'd recognize her."

She paused to give Elin a hug. "Be strong, kid, here comes the rough part. Well, her boyfriend was brokenhearted. He didn't want to eat, and he didn't want to play with his friends. He was a real shit to work with. But then he got an idea.

"You see, anyone who works with experimental wetware has her personality permanently recorded in case there's an accident and it needs to be restored. And if that person dies or becomes God, the personality rights revert to IGF. They're sneaky like that.

"Well, Tory—did I mention his name was Tory?—thought to himself: *What if somebody were to come here for a new personality?* Happens about twice a year. Bound to get worse in the future. And Magritte is the only place this kind of work can be done. The personality bank is random-accessed by computer, so there'd be a chance of his getting Coral back, just as good as new. Only not a very good chance, because there's *lots* of garbage stuffed into the personality bank.

"And then he had a *bad* thought. But you mustn't blame him for it. He was working from a faulty set of moral precepts. Suppose, he thought, / *rigged the computer so that instead of choosing randomly, it would give Coral's personal-ity to the very first little girl who came along?* And that was what he did." Landis lapsed into silence.

Elin wiped back a snuffle. "How does the story end?"

"I'm still waiting on that one."

"Oh." Elin pulled herself together and stood. Landis followed.

"Listen. Remember what I told you about being a puppy tripping over its paws? Well, you've just stubbed your toes and they hurt. But you'll get over it. People do."

"Today we make a Buddha," Tory said. Elin fixed him with a cold stare, said nothing; even though he was in green and red, immune. "This is a higher-level program, integrat-ing all your mental functions and putting them under your conscious control. So it's especially important that you keep your hands to yourself, okay?"

"Rot in hell, you cancer."

"I beg your pardon?"

Elin did not respond, and after a puzzled silence Tory continued: ' I'm leaving your sensorium operative, so when I switch you over, I want you to pay attention to your sur-roundings. Okay?"

The second Trojan horse came on. Everything changed.

It wasn't a physical change, not one that could be seen with the eyes. It was more as if the names for everything had gone away. A knee-tall oak grew nearby, very much like the one she had crushed accidentally in New Detroit when she had lost her virginity many years ago. And it meant nothing to her. It was only wood growing out of the ground.

A mole poked its head out of its burrow, nose crinkling, pink eyes weak. It was just a small, biological machine. "Whooh," she said involuntarily. "This is awfully cold."

"Bother you?"

Elin studied him, and there was nothing there. Only a human being, as much an object as the oak, and no more. She felt nothing toward or against him. "No," she said.

"We're getting a good recording." The words meant noth-ing; they were clumsy, devoid of content.

In the grass around her, Elin saw a gray flickering, as if it were all subtly on fire. Logically she knew the flickering was the firing of nerves in the rods and cones of her eyes, but emotionally it was something else: It was time. A gray fire that destroyed the world constantly, eating it away and re-making it again and again.

And it didn't matter.

A great calmness wrapped itself around Elin, an intelligent detachment, cold and impersonal. She

found herself identify-ing with it, realizing that existence was simply *not important*. It was all things, objects.

She could not see Tory's back, was no longer willing to assume it even existed. She could look up and see the near side of the earth. The far side might well not exist, and if it didn't, well *that* didn't matter either.

She stripped away the world, ignored the externalities. / *never realized how dependent I am on sensory input*, she thought. And if you ignored it—there was the void. It had no shape or color or position, but it was what underlies the bright interplay of colors that was constantly being destroyed by the gray fires of time. She contemplated the raw stuff of existence.

"Please don't monkey around with your programming," Tory said.

The body was unimportant, too; it was only the focal point for her senses. Ignore them and you could ignore *it*. Elin could feel herself fading in the presence of the void. It had no material existence, no real being. But neither had the world she had always taken for granted—it was but an echo, a ghost, an image reflected in water.

It was like being a program in a machine and realizing it for the first time.

Landis's voice flooded her. "Donnelly, for God's sake, keep your fingers off the experiment!" The thing was, the underlying nothingness was *real*—if "real" had any meaning. If meaning had meaning. But beyond real and beyond mean-ing, there is what *is*. And she had found it.

"Donnelly, you're treading on dangerous ground. You've—" Landis's voice was a distraction, and she shut it off. Elin felt the desire to merge with what *was*; one simply had to stop the desire for it, she realized, and it was done.

But on this realization, horror collapsed upon her. Flames seared and burned and crisped, and there were snakes among them, great slimy things with disgusting mouths and needle-sharp fangs.

She recoiled in panic, and they were upon her. The flames were drawn up into her lungs, and hot maggots wallowed in her brain tissues. She fled through a mind that writhed in agony, turning things on and off.

Until abruptly she was back in her body, and nothing pursued her. She shivered, and her body responded. It felt wonderful.

"Well, *that* worked at least," Tory said.

"What—" her voice croaked. She cleared her throat and tried again. "What happened to me?"

"Just what we'd hoped for—when your mind was threat-ened with extinction, it protected itself by reprogramming back down to a normal state. Apparently, keeping your ego cranked up high works."

Elin realized that her eyes were still closed; she opened them now and convulsively closed her hand around the edge of the metal cot. It was solid and real to the touch. Such a good feeling.

"I'll be down in a minute," Tory said. "Just now, you need to rest." He touched a bone inductor, and Elin fell into blackness.

Floating again, every metaphorical nerve on edge, Elin found herself hypersensitive to outside influences, preternatu-rally aware, even suggestible. Still, she suspected—more than sensed—Coral's presence. *Go away*, she thought. *This is my mind now*.

*I am here, and I am always. You have set foot in my country and are dimly aware of my presence. Later, when you have climbed into the mountains, you will truly know me; and then you will be as I.*

*Everyone tells me what I'm going to do*, Elin thought angrily. *Don't I get any say?*

The thought that came to her was almost amused: *You are only a program caught in a universal web of programming. You will do as your program dictates. To be free of the programs is to be God.*

Despite her anger, despite her hurt, despite the cold trickle of fear she tried to keep in the background, Elin was curious. *What's it like?* she couldn't help asking.

*It is golden freedom. The universe is a bubble infinitely large, and we who are God are the film on the bubble's outside. We interact and we program. We make the stars shine and the willows grow. We program what you will want for lunch. The programming flows through us, and we alter it and maintain the universe.*

Elin pounced on this last statement. *Haven't done a very good job of it, have you?*

*We do not tamper. When you are one with us, you will understand.*

This was, Elin realized, the kind of question-and-answer session Coral must have gone through repeatedly as part of the Star Maker project. She searched for a question that no one else would have asked, one that would be hers alone. And after some thought she found it.

*Do you still—personally—love Tory Shostokovich?*

At first there was a slight pause, then: *The kind of love you mean is characteristic of lower-order programming. Not of program-free intelligence.*

A moment later Tory canceled all programming, and she floated to the surface, leaving God behind. But even before then she was acutely aware that she had not received a straight answer.

"Elin, we've got to talk."

She was patched into the outside monitors, staring across Mare Imbrium. It was a straight visual program; she could feel the wetwire leads dangling down her neck, the warm, humid air of Magritte against her skin. "Nothing to talk *about*," she said.

"Dammit, yes there is! I'm not about to lose you again because of a misunderstanding, a—a matter of semantics."

The thing about Outside was its airless clarity. Rocks and shadows were so preternaturally *sharp*. From a sensor or the crater's seaward slope, she stared off into Mare Imbrium; it was monotonous but in a comforting sort of way. A little like when she had made a Buddha. There was no meaning out there, nothing to impose itself between her and the surface.

"I don't know how you found out about Coral," Tory said, "and I guess it doesn't matter. I always figured you'd find out sooner or later. That's not important. What matters is that I love you—"

"Oh, hush up!"

"—and that you love me. You can't pretend you don't."

Elin felt her nails dig into her palms. "Sure I can," she said. She hopscotched down the crater to the surface. There the mass driver stood, a thin monorail stretching kilometers into the Imbrium, its gentle slope all but imperceptible.

"You're identifying with the woman who used to be Elin Donnelly. There's nothing wrong with that; speaking as a wetsurgeon, it's a healthy sign. But it's something you've got to grow out of."

"Listen, Shostokovich, tinkering with my emotions doesn't change who I am. I'm not your dead lady friend, and I'm not about to take her place. So why don't you just go away and stop jerking me around, huh?"

Tiny repair robots prowled the mass driver's length, stop-ping occasionally for a spotweld. Blue

sparks sputtered sound-lessly over the surface.

"You're not the old Elin Donnelly either, and I think you know it. Bodies are transient, memories are nothing. Your spontaneity and grace, your quiet strength, your impatience—the small lacks and presences of you I've known and loved for years—are what make you yourself. The name doesn't matter, nor the past. You are who you are, and I love you for it."

"Yeah, well, what I am does not love you, buster."

One of the repairbots slowly fell off the driver. It hit, bounced, struggled to regain its treads, then scooted back toward its work.

Tory's voice was almost regretful. "You do, though. You can't hide that from me. I know you as your lover and as your wetsurgeon. You've let me become a part of you, and no matter how angry you might temporarily be, you'll come back to me."

Elin could feel her body trembling with rage. "Yeah, well if that's true, then why tell *me*! Hah? Why not just go back to your hut and wait for me to come crawling?"

"Because I want you to quit your job." , "Say what?"

"I don't want you to become God. It was a mistake the last time, and I'm afraid it won't be any better with the new programs. If you go up into God and can't get down this time, you'll do it the next time. And the next. I'll spend my life here waiting for you, re-creating you, losing you. Can't you see it—year after year, replaying the same tired old tape?" Tory's voice fell to a whisper. "I don't think I could take it even once more."

"If you know me as well as you say, then I guess you know my answer," Elin said coldly.

She waited until Tory's footsteps moved away, fading, defeat echoing after. Only then did Elin realize that her sensor had been scanning the same empty bit of Magritte's slope for the last five minutes.

It was time for the final Trojan horse. "Today we make a god," Tory said. "This is a total conscious integration of the mind in an optimal efficiency pattern. Close your eyes and count to three."

*One*. The hell of it was that Tory was right. She still loved him. He was the one man she wanted and was empty without.

*Two*. Worse, she didn't know how long she could go on without coming back to him—and, good God, would that be humiliating!

She was either cursed or blessed; cursed perhaps for the agonies and humiliations she would willingly undergo for the sake of this one rather manipulative human being. Or maybe blessed, in that at least there was *someone* who could move her so, deserving or not. Many went through their lives without.

*Three*. She opened her eyes.

Nothing was any different. Magritte was as ordinary, as mundane as ever, and she felt no special reaction to it one way or another. Certainly she did not feel the presence of God.

"I don't think this is working," she tried to say. The words did not come. From the corner of her eye, she saw Tory wiping clean his facepaint, shucking off his jumpsuit. But when she tried to sit up, she found she was paralyzed.

*What is this maniac doing?*

Tory's face loomed over her, his eyes glassy, almost fear-ful. His hair was a tangled mess; her fingers itched with the impulse to run a comb through it.

"Forgive me, love." He kissed her forehead lightly, her lips ever so gently. Then he was out of her field of vision, stretching out on the grass beside the cot.

Elin stared up at the dome roof, thinking: *No*. She heard him strap the bone inductors to his body, one by one, and then a sharp click as he switched on a recorder. The program-ming began to flow into him.

A long wait—perhaps, twenty seconds viewed objectively— as the wetware was loaded. Another click as the recorder shut off. A moment of silence, and then—

Tory gasped. One arm flew up into her field of vision, swooped down out of it, and he began choking. Elin strug-gled against her paralysis, could not move. Something broke noisily, a piece of equipment by the sound of it, and the choking and gasping continued. He began thrashing wildly.

*Tory, Tory, what's happening to you?*

"It's just a *grand mal* seizure," Landis said. "Nothing we can't cope with, nothing we weren't prepared for." She touched Elin's shoulder reassuringly, called back to the crowd huddling about Tory, "*Hey!* One of you loopheads—somebody there know any programming? Get the lady out of this."

A tech scurried up, made a few simple adjustments with her machinery. The others—still gathering, Landis had been only the third on the scene—were trying to hold Tory still, to fit a bone inductor against his neck. There was a sudden gabble of comment, and Tory flopped wildly. Then a collec-tive sigh as his muscles eased and his convulsions ceased.

"There," the tech said, and Elin scabbled off the couch.

She pushed through the people (and a small voice in the back of her head marveled: *A crowd! How strange*) and knelt before Tory, cradling his head ift her arms.

He shivered, eyes wide and unblinking. "Tory, what's the *matter*V

His terrible eyes turned on her. "*Nichevo*."

"What?"

"Nothing," Landis said. "Or maybe 'it doesn't matter' is a better translation."

A wetware tech had taken control, shoving the crowd back. He reported to Landis, his mouth moving calmly under the interplay of green and red. "Looks like a flaw in the pro-gramming philosophy. We were guessing that bringing the ego along would make God such an unpleasant experience that the subject would let us deprogram, without interfering— now we know better."

Elin stroked Tory's forehead. His muscles clenched, then loosened as a medtech reprogrammed the body responses. "Why isn't anyone *doing* anything?" she demanded.

"Take a look," Landis said, and patched her into the intercom. In her mind's eye, Elin could see dozens of wetware techs submitting program after program. A branching wetware diagram filled one channel, and as she watched, minor changes would occur as programs took hold, then be unmade as Tory's mind rejected them. "We've got an imagery tap of his *Weltanschauung* coming up," some nameless tech reported.

Something horrible appeared on a blank channel.

Elin could take only an instant's exposure before her mind reflexively shut the channel down, but that instant was more than enough. She stood in a room infinitely large and clut-tered with great, noisome machines.

They were tended by malevolent demons who shrieked and cackled and were machines themselves, and they generated pain and madness.

The disgust and revulsion she felt was absolute. It could not be put into words—no more than could the actual experi-ence of what she had seen. And yet—she knew this much about wetware techniques—it was only a rough approxima-tion, a cartoon, of what was going through Tory's head.



Elin's body trembled with shock, and by slow degrees she realized that she had retreated to the surface world.

Tory's head was still cradled in her arms. A wetware tech standing nearby looked stunned, her face gray.

Elin gathered herself together, said as gently as she could, "Tory, what *is* that you're seeing?"

Tory turned his stark, haunted eyes on her, and it took an effort of will not to flinch. Then he spoke, his words shock-ingly calm.

"It is—what is. It's reality. The universe is a damned cold machine, and all of us only programs within it. We perform the actions we have no choice but to perform, and then we fade into nothingness. It's a cruel and noisy place."

"I don't understand—didn't you always say that we were just programs? Wasn't that what you always believed?"

"Yes, but now I experience it."

Elin noticed that her hand was slowly stroking his hair; she did not try to stop it. "Then come *down*, Tory. Let them deprogram you."

He did not look away. "Mcfcevo," he said.

The tech, recovered from her shock, reached toward a piece of equipment. Landis battered her hand away. "Hold it right there, techie! Just what do you think you're doing?"

The woman looked impatient. "He left instructions that if the experiment turned out badly, I was to pull the terminator switch."

"That's what I thought. There'll be no mercy killings while *I'm* on the job, Mac."

"I don't understand." The tech backed away, puzzled. "Surely you don't want him to suffer."

Landis was gathering herself for a withering reply when the intercom cut them all off. A flash of red shot through the sensorium, along with the smell of bitter almond, a prickle of static electricity, the taste of *kimchi*. "Emergency! We've got an emergency!" A black and white face materialized in Elin's mind. "Emergency!"

Landis flipped into the circuit. "What's the problem? Show us."

"You're not going to believe this." The face disappeared and was replaced by a wide-angle shot of the lake.

The greenish-black water was calm and stagnant. The thrust-cone island, with its scattered grass and weeds, slumbered.

And God walked upon the water.

They gawked, all of them. Coral walked across the lake, her pace determined but not hurried, her face serene. The pink soles of her bare feet just touched the surface.

*/ didn't believe her*, Elin thought wildly. She saw Father Landis begin to cross herself, her mouth hanging open, eyes wide in disbelief. Halfway through her gesture, the Jesuitical wet ware took hold. Her mouth snapped shut, and her face became cold and controlled. She pulled herself up straight.

"Hans," the priest said, "push the button."

"No!" Elin shrieked, but it was too late. Still hooked into the intercom, she saw the funny little man briskly, efficiently obey.

For an instant, nothing happened. Then bright glints of light appeared at all of the condenser units,

harsh and actinic. Steam and smoke gushed from the machinery, and a fraction of a second later, there was an ear-slapping gout of sound.

Bits of the sky were blown away.

Elin turned, twisted, fell. She scrambled across the ground and threw her arms around Tory.

The air was in turmoil. The holes in the dome roof—small at first—grew as more of the dome flaked away, subjected to stresses it wasn't designed to take. An uncanny whistling grew to a screech, then a scream, and then there was an all-encompassing *whoomph*, and the dome shattered.

Elin was flung upward, torn away from Tory, painfully flung high and away. All the crater was in motion, the rocks tearing out of the floor, the trees splintering upward, the lake exploding into steam.

The screaming died—the air was gone. Elin's ears rang furiously, and her skin stung everywhere. Pressure grew within her, the desire of her blood to mate with the vacuum, and Elin realized that she was about to die.

A quiet voice said: *This must not be.*

Time stopped.

Elin hung suspended between moon and death. The shards and fragments of an instant past crystallized and shifted. The world became not misty, exactly, but apositional. Both it and she grew tentative, possibilities rather than actual things.

*Come be God with me now*, Coral said, but not to Elin.

Tory's presence flooded the soupy uncertainty, a vast and powerful thing, but wrong somehow, twisted. But even as Elin felt this, there was a change within him, a sloughing off of identity, and he seemed to straighten, to heal.

All around, the world began to grow more numinous, more real. Elin felt tugged in five directions at once. Tory's presence swelled briefly, then dwindled, became a spark, less than a spark, nothing.

*Yes.*

With a roaring of waters and a shattering of rocks, with an audible thump, the world returned.

Elin unsteadily climbed down the last flight of stone stairs from the terraces to the lake-front. She passed by two guards at the foot of the stairs, their facepaint as hastily applied as their programming, several more on the way to the nearest trellis farm. They were everywhere since the incident.

She found the ladder up into the farm and began climbing. It was biological night, and the agtechs were long gone.

Hand over hand she climbed, as far and high as she could, until she was afraid she would miss a rung and tumble off. Then she swung herself onto a ledge, wedging herself between strawberry and yam planters. She looked down on the island, and though she was dizzyingly high, she was only a third of the way up.

"Now what the hell am I doing here?" she mumbled to herself.

She swung her legs back and forth, answered her own question: "Being a piss-ass drunk." She cackled. *There* was something she didn't have to share with Coral. She was capable of getting absolutely blitzed and walking away from the bar before it hit her. It was something metabolic.

Below, Tory and Coral sat quietly on their monkey island. They did not touch, did not make love or hold hands or even glance at one another—they just sat. Being gods.

Elin squinted down at the two. "Like to upchuck all over you," she mumbled. Then she squeezed her eyes and fists tight, drawing tears and pain. *Dammit, Tory!*

Blinking hard, she looked away from the island, down into the jet-black waters of the lake. The brighter stars were reflected there. A slight breeze rippled the water, making them twinkle and blink, as if lodged in a Terran sky. They floated lightly on the surface, swarmed and coalesced, and formed Tory's face in the lake. He smiled warmly, invitingly.

A hand closed around her arm, and she looked up into the stern face of a security guard. "You're drunk, Ms.," he said, "and you're endangering property."

She looked where he pointed, at a young yam plant she had squashed when she sat down, and began to laugh. Smoothly, professionally, the guard rolled up her sleeve, clamped a plastic bracelet around her wrist. "Time to go," he said.

By the time the guard had walked Elin up four terraces, she was nearly sober. A steady trickle of her blood wound through the bracelet, was returned to her body cleansed of alcohol. A sacrilegious waste of wine, in her opinion.

In another twenty steps, the bracelet fell off her wrist. The guard snapped it neatly from the air and disappeared. Despair closed in on her again. *Tory, my love!* And since there was no hope of sleep, she kept on trudging up the terraces, back toward Hans's rathskeller, for another bellyful of wine.

There was a small crowd seated about the rock that served Hans as a table, lit by a circle of hologram-generated fairy lights. Father Landis was there, and drinking heavily. "To-morrow I file my report," she announced. "The synod is pulling out of this, withdrawing funding."

Hans sighed, took a long swig of his own wine, winced at its taste. "I guess that's it for the Star Maker project, huh?"

Landis crossed her fingers. "Pray God." Elin, standing just outside the circle, stood silently, listening.

"I don't ever want to hear that name again," a tech grumbled.

"You mustn't confuse God with what you've just seen," Landis admonished.

"Hey, come on!" Hans said. "She moved time backwards or something. I saw it myself. This place exploded—doesn't that prove something?"

Landis grinned, reached out to ruffle his hair. "Sometimes I worry about you, Hans. You have an awfully *small* concept of God." Several of the drinkers laughed.

He blushed, said, "No, really."

"Well, I'll try to keep this"—she leaned forward, rapped her mug against the rock, "fill this up again, hey?—keep it simple. We had analysts crawl up and down Coral's description of the universe, and did you know there was no place in it *anywhere* for such things as mercy, hope, faith? No, we got an amalgam of substrates, supraprograms, and self-metaediting physics. Now what makes God superior to us is not just intellect—we've all known some damn clever bastards. And it's not just power, or I could go and buy an atomic device on the black market and start my own religion.

"No, by *definition* God is my moral superior. Now I myself am but indifferently honest—but to Coral, moral considerations don't even exist. Get it?"

Only Elin noticed the haunted, hopeless light in Landis's eyes or realized that she was spinning words effortlessly, without conscious control. Deep within, the woman was caught in a private crisis of faith.

"Yeah, I guess." Hans scratched his head. "I'd still like to know just what happened between her and Tory there at the end."

"I can answer that," a wetware tech said. The others turned to face her, and she smirked, the center of attention. "What the hell, they plant the censor blocks in us all tomorrow—this is probably my only chance to talk about it.

"We reviewed all the tapes, and found that the original problem stemmed from a basic design flaw. Shostokovich should never have brought his ego along. The God state is very ego-threatening; he couldn't accept it. His mind twisted it, denied it, made it into a thing of horror. Because to accept it would mean giving up his identity." She paused.

"Now we don't understand the why or how of what happened. But *what* was done is very clearly recorded. Coral came along and stripped away his identity."

"*Hogwash!*" Landis was on her feet, belligerent and un-steady. "After all that happened, you can't say they don't have any identity! Look at the mess that Coral made to join Tory to her—that wasn't the work of an unfeeling, identity-free creature."

"Our measurements showed no trace of identity at all," the tech said in a miffed tone.

"Measurements! Well, isn't that just scientific as all get-out?" The priest's face was flushed with drunken anger. "Have any of you clowns given any thought to just what we've created here? This gestalt being is still young—a newborn infant. Someday it's going to grow up. What happens to us all when it decides to leave the island, hey? I—" She stopped, her voice trailing away. The drinkers were silent, had all drawn away from her.

" 'Scuse me," she muttered. "Too much wine." And sat.

"Well." Hans cleared his throat, quirked a smile. "Any-body for refills?"

The crowd came back to life, a little too boisterous, too noisily, determinedly cheerful. Watching from the fringes, outside the circle of light, Elin had a sudden dark fantasy, a walking nightmare.

A desk tech glanced her way. He had Tory's eyes. When he looked away, Tory smiled out of another's face. The drinkers shifted restlessly, chattering and laughing, like dancers pantomiming a party in some light opera, and the eyes danced with them. They flitted from person to person, materializing now here, now there, surfacing whenever an individual chanced to look her way.

She heard a quiet voice say, "We were fated to be lovers."

*Go away, go away, go away*, Elin thought furiously, and the hallucination ceased.

After a moment spent composing herself, Elin quietly slipped around to where Landis sat. "I'm leaving in the morning," she said. The new persona had taken; they would not remove her facepaint until just before the lift up, but that was mere formality. She was cleared to leave.

Landis looked up, and for an instant the woman's doubt and suffering were writ plain on her face. Then the mask was back, and she smiled. "Just stay away from experimental religion, hey kid?" They hugged briefly. "And remember what I told you about stubbing your toes."

There was one final temptation to be faced. Sitting in the hut, Tory's terminal in her lap, Elin let the soothing green light of its alphanumeric wash over her. She thought of Tory, of his lean body under hers in the pale blue earthlight. "We were meant to be lovers," he'd said. She thought of life without him.

The terminal was the only artifact Tory had left behind that held any sense of his spirit. It had been his plaything, his diary, and his toolbox, and its memory still held the Trojan horse programs he had been working with when he was—transformed.

One of those programs, she knew, would make her a god.

She stared up through the ivy at the domed sky. Only a few stars were visible between the black silhouetted leaves, and these winked off and on with the small movements she made breathing. She thought back to Coral's statement that Elin would soon join her, merging into the unselfed, autistic state that only Tory's meddling had spared her.

"God always keeps her promises," Tory said quietly.

Elin started, looked down, and saw that the grass to the far side of the hut was moving, flowing. Swiftly it formed the familiar, half-amused, half-embittered features of her lover, continuing to flow until all of his head and part of his torso rose Up from the floor.

She was not half so startled as she would have liked to be. Of *course* the earlier manifestations of Tory had been real, not phantoms thrown up by her grief. They were simply not her style.

Still, Elin rose to her feet apprehensively. "What do you want from me?"

The loam-and-grass figure beckoned. "Come. It is time you join us."

"I am not a program," Elin whispered convulsively. She backed away from the thing. "I can make my *own* decisions!"

She turned and plunged outside, into the fresh, cleansing night air. It braced her, cleared her head, returned to her some measure of control.

A tangle of honeysuckle vines on the next terrace wall up moved softly. Slowly, gently, they became another manifes-tation, of Coral this time, with blossoms for the pupils of her eyes. But she spoke with Tory's voice.

"You would not enjoy godhood," he said, "but the being you become will."

"Give me time to *think*!" she cried. She wheeled and strode rapidly away, out of the residential cluster, through a scattering of boulders, and into a dark meadow.

There was a quiet kind of peace here, and Elin wrapped it about her.

She needed that peace, for she had to decide between her humanity and Tory. It should have been an easy choice, but—the *pain* of being without.

Elin stared up at the earth; it was a world full of pain. If she could reach out and shake all the human misery loose, it would flood all of creation, extinguishing the stars and poi-soning the space between.

There was, if not comfort, then a kind of cold perspective in that, in realizing that she was not alone, that she was merely another member of the commonality of pain. It was the heritage of her race. And yet—somehow—people kept on going.

If they could do it, so could she.

Some slight noise made her look back at the boulder field. Tory's face was appearing on each of the stones, every face slightly different, so that he gazed upon her with a dozen expressions of love. Elin shivered at how *alien* he had be-come. "Your need is greater than your fear," he said, the words bouncing back and forth between faces. "No matter what you think now, by morning you will be part of us."

Elin did not reply immediately. There was something in her hand—Tory's terminal. It was small and weighed hardly at all. She had brought it along without thinking.

A small, bleak cry came from overhead, then several oth-ers. Nighthawks were feeding on insects near the dome roof. They were too far, too fast, and too dark to be visible from here.

"The price is too high," she said at last. "Can you under-stand that? I won't give up my humanity for you."

She hefted the terminal in her hand, then threw it as far and as hard as she could. She did not hear it fall.

Elin turned and walked away. Behind her, the rocks smiled knowingly.

## **FEARS** Pamela Sargent

*A single scientific discovery can effect great changes in our history, as Pamela Sargent shows in this quietly powerful story of a not-very-distant future in which a pill has been perfected that enables parents to choose the sex of their children. What might that ability do to the structure of society?*

*Pamela Sargent has edited the Women of Wonder anthologies, and has written such novels as The Sudden Star and The Alien Upstairs. Her new novel, Venus of Dreams, will be published this fall.*

I was on my way back to Sam's when a couple of boys tried to run me off the road, banging my fender a little before they sped on, looking for another target. My throat tightened and my chest heaved as I wiped my face with a handkerchief. The boys had clearly stripped their car to the minimum, ditching all their safety equipment, knowing that the highway patrol was unlikely to stop them; the police had other things to worry about.

The car's harness held me; its dashboard lights flickered. As I waited for it to steer me back onto the road, the engine hummed, choked, and died. I switched over to manual; the engine was silent.

I felt numb. I had prepared myself for my rare journeys into the world outside my refuge, working to perfect my disguise. My angular, coarse-featured face stared back at me from the mirror overhead as I wondered if I could still pass. I had cut my hair recently, my chest was still as flat as a boy's, and the slightly padded shoulders of my suit imparted a bit of extra bulk. I had always been taken for a man before, but I had never done more than visit a few out-of-the-way, dimly lighted stores where the proprietors looked closely only at cards or cash.

I couldn't wait there risking a meeting with the highway patrol. The police might look a bit too carefully at my papers and administer a body search on general principles. Stray women had been picked up before, and the rewards for such a discovery were great; I imagined uniformed men groping at my groin, and shuddered. My disguise would get a real test. I took a deep breath, released the harness, then got out of the car.

The garage was half a mile away. I made it there without enduring more than a few honks from passing cars.

The mechanic listened to my husky voice as I described my problem, glanced at my card, took my keys, then left in his tow truck, accompanied by a younger mechanic. I sat in his office, out of sight of the other men, trying not to let my fear push me into panic. The car might have to remain here for some time; I would have to find a place to stay. The mechanic might even offer me a lift home, and I didn't want to risk that. Sam might be a bit too talkative in the man's presence; the mechanic might wonder about someone who lived in such an inaccessible spot. My hands were shaking; I thrust them into my pockets.

I started when the mechanic returned to his office, then smiled nervously as he assured me that the car would be ready in a few hours; a component had failed, he had another like it in the shop, no problem. He named a price that seemed excessive; I was about to object, worried that argument might only provoke him, then worried still more that I would look odd if I didn't dicker with him. I settled for frowning as he slipped my card into his terminal, then handed it back to me.

"No sense hanging around here." He waved one beefy hand at the door. "You can pick up a shuttle to town out there, comes by every fifteen minutes or so."

I thanked him and went outside, trying to decide what to do. I had been successful so far; the other mechanics didn't even look at me as I walked toward the road. An entrance to the town's underground

garage was just across the highway; a small, glassy building with a sign saying "Marcello's" stood next to the entrance. I knew what service Marcello sold; I had driven by the place before. I would be safer with one of his employees, and less conspicuous if I kept moving; curiosity overcame my fear for a moment. I had made my decision.

I walked into Marcello's. One man was at a desk; three big men sat on a sofa near one of the windows, staring at the small holo screen in front of them. I went to the desk and said, "I want to hire a bodyguard."

The man behind the desk looked up; his mustache twitched. "An escort. You want an escort."

"Call it whatever you like."

"For how long?"

"About three or four hours."

"For what purpose?"

"Just a walk through town, maybe a stop for a drink. I haven't been to town for a while, thought I might need some company."

His brown eyes narrowed. I had said too much; I didn't have to explain myself to him. "Card."

I got out my card. He slipped it into his outlet and peered at the screen while I tried to keep from fidgeting, expecting the machine to spit out the card even after all this time. He returned the card. "You'll get your receipt when you come back." He waved a hand at the men on the sofa. "I got three available. Take your pick."

The man on my right had a lean, mean face; the one on the left was sleepy-eyed. "The middle guy."

"Ellis."

The middle man stood up and walked over to us. He was a tall black man dressed in a brown suit; he looked me over, and I forced myself to gaze directly at him while the man at the desk rummaged in a drawer and took out a weapon and holster, handing them to my escort.

"Ellis Gerard," the black man said, thrusting out a hand.

"Joe Segor." I took his hand; he gripped mine just long enough to show his strength, then let go. The two men on the sofa watched us as we left, as if resenting my choice, then turned back to the screen.

We caught a shuttle into town. A few old men sat near the front of the bus under the watchful eyes of the guard; five boys got on behind us, laughing, but a look from the guard quieted them. I told myself again that I would be safe with Ellis.

"Where to?" Ellis said as we sat down. "A visit to a pretty boy? Guys sometimes want escorts for that."

"No, just around. It's a nice day—we could sit in the park for a while."

"I don't know if that's such a good idea, Mr. Segor."

"Joe."

"Those crossdressers hang out a lot there now. I don't like it. They go there with their friends and it just causes trouble—it's a bad element. You look at them wrong, and then you've got a fight. It ought to be against the law."

"What?"

"Dressing like a woman. Looking like what you're not." He glanced at me. I looked away, my jaw tightening.

We were in town now, moving toward the shuttle's first stop. "Hey!" one of the boys behind us shouted. "Look!" Feet shuffled along the aisle; the boys had rushed to the right side of the bus and were kneeling on the seats, hands pressed against the window; even the guard had turned. Ellis and I got up and changed seats, looking out at what had drawn the boys' attention.

A car was pulling into a spot in front of a store. Our driver put down his magazine and slowed the bus manually; he obviously knew his passengers wanted a look. Cars were not allowed in town unless a woman was riding in one; even I knew that. We waited. The bus stopped; a group of young men standing outside the store watched the car.

"Come on, get out," a boy behind me said. "Get out of the car."

Two men got out first. One of them yelled at the loiterers, who moved down the street before gathering under a lamp-post. Another man opened the back door, then held out his hand.

She seemed to float out of the car; her long pink robe swirled around her ankles as she stood. Her hair was covered by a long, white scarf. My face grew warm with embarrassment and shame. I caught a glimpse of black eyebrows and white skin before her bodyguards surrounded her and led her into the store.

The driver pushed a button and picked up his magazine again; the bus moved on. "Think she was real?" one of the boys asked.

"I don't know," another replied.

"Bet she wasn't. Nobody would let a real woman go into a store like that. If I had a girl, I'd never let her go anywhere."

"If I had a trans, I'd never let her go anywhere."

"Those trans guys—they got it made." The boys scrambled toward the back of the bus.

"Definitely a trans," Ellis said to me. "I can tell. She's got a mannish kind of face."

I said, "You could hardly see her face."

"I saw enough. And she was too tall." He sighed. "That's the life. A little bit of cutting and trimming and some implants, and there you are—you don't have to lift a finger. You're legally female."

"It isn't just a little bit of cutting—it's major surgery."

"Yeah. Well, I couldn't have been a transsexual anyway, not with my body." Ellis glanced at me. "You could have been, though."

"Never wanted it."

"It's not a bad life in some ways."

"I like my freedom." My voice caught on the words.

"That's why I don't like crossdressers. They'll dress like a woman, but they won't turn into one. It just causes trouble—you get the wrong cues."

The conversation was making me uneasy; sitting so close to Ellis, hemmed in by his body and the bus's window, made me feel trapped. The man was too observant. I gritted my teeth and turned toward the window. More stores had been boarded up; we passed a brick school building with shattered windows and an empty playground. The town was declining.

We got off in the business district, where there was still a semblance of normal life. Men in suits came and went from their offices, hopped on buses, strolled toward bars for an early drink.

"It's pretty safe around here," Ellis said as we sat on a bench. The bench had been welded to the



ground; it was covered with graffiti and one leg had been warped. Old newspapers lay on the sidewalk and in the gutter with other refuse. One bore a headline about the African war; another, more recent, the latest news about Bethesda's artificial womb program. The news was good; two more healthy children had been born to the project, a boy and a girl. I thought of endangered species and extinction.

A police car drove by, followed by another car with opaque windows. Ellis gazed after the car and sighed longingly, as if imagining the woman inside. "Wish I was gay," he said sadly, "but I'm not. I've tried the pretty boys, but that's not for me. I should have been a Catholic, and then I could have been a priest. I live like one anyway."

"Too many priests already. The Church can't afford any more. Anyway, you'd really be frustrated then. They can't even hear a woman's confession unless her husband or a bodyguard is with her. It's just like being a doctor. You could go nuts that way."

"I'll never make enough to afford a woman, even a trans."

"There might be more women someday," I said. "That project at Bethesda's working out."

"Maybe I should have gone on one of those expeditions. There's one they let into the Philippines, and another one's in Alaska now."

I thought of a team of searchers coming for me. If they were not dead before they reached my door, I would be; I had made sure of that. "That's a shady business, Ellis."

"That group in the Amazon actually found a tribe—killed all the men. No one'll let them keep the women for themselves, but at least they have enough money to try for one at home." Ellis frowned. "I don't know. Trouble is, a lot of guys don't miss women. They say they do, but they really don't. Ever talk to a real old-timer, one that can remember what it was like?"

"Can't say I have."

Ellis leaned back. "A lot of those guys didn't really like girls all that much. They had places they'd go to get away from them, things they'd do together. Women didn't think the same way, didn't act the same—they never did as much as men did." He shaded his eyes for a moment. "I don't know—sometimes one of those old men'll tell you the world was gentler then, or prettier, but I don't know if that's true. Anyway, a lot of those women must have agreed with the men. Look what happened—as soon as you had that pill that could make you sure you had a boy if you wanted, or a girl, most of them started having boys, so they must have thought, deep down, that boys were better."

Another police car drove past; one of the officers inside looked us over before driving on. "Take a trans," Ellis said. "Oh, you might envy her a little, but no one really has any respect for her. And the only real reason for having any women around now is for insurance—somebody's got to have the kids, and we can't. But once that Bethesda project really gets going and spreads, we won't need them anymore."

"I suppose you're right."

Four young men, dressed in work shirts and pants, approached us and stared down at us silently. I thought of the boys I had once played with before what I had made a difference, before I had been locked away. One young man glanced quickly down the street; another took a step forward. I stared back and made a fist, trying to keep my hand from shaking; Ellis sat up slowly and let his right hand fall to his waist, near his holster. We kept staring until the group turned from us and walked away.

"Anyway, you've got to analyze it." Ellis crossed his legs. "There's practical reasons for not having a lot of women around. We need more soldiers—everybody does now, with all the trouble in the world. And police, too, with crime the way it is. And women can't handle those jobs."

"Once people thought they could." My shoulder muscles were tight; I had almost said *we*.

"But they can't. Put a woman up against a man, and the man'll always win." Ellis draped an arm over

the back of the bench. "And there's other reasons, too. Those guys in Wash-ington like keeping women scarce, having their pick of the choice ones for themselves—it makes their women more valuable. And a lot of the kids'll be theirs, too, from now on. Oh, they might loan a woman out to a friend once in a while, and I suppose the womb project'll change things some, but it'll be their world eventually."

"And their genes," I said. I knew that I should change the subject, but Ellis had clearly accepted my pose. In his conver-sation, the ordinary talk of one man to another, the longest conversation I had had with a man for many years, I was looking for a sign, something to keep me from despairing. "How long can it go on?" I continued. "The population keeps shrinking every year—there won't be enough people soon."

"You're wrong, Joe. Machines do a lot of the work now anyway, and there used to be too many people. The only way we'll ever have more women is if someone finds out the Russians are having more, and that won't happen—they need soldiers, too. Besides, look at it this way—maybe we're doing women a favor if there aren't as many of them. Would you want to be a woman, having to be married by sixteen, not being able to go anywhere, no job until she's at least sixty-five?"

And no divorce without a husband's permission, no contra-ception, no higher education—all the special privileges and protections could not make up for that. "No," I said to Ellis. "I wouldn't want to be one." Yet I knew that many women had made their peace with the world as it was, extorting gifts and tokens from their men, glorying in their beauty and their pregnancies, lavishing their attention on their children and their homes, tormenting and manipulating their men with the sure knowledge that any woman could find another man—for if a woman could not get a divorce by herself, a man more powerful than her husband could force him to give her up if he wanted her himself.

I had dreamed of guerrillas, of fighting women too proud to give in, breeding strong daughters by a captive male to carry on the battle. But if there were such women, they, like me, had gone to ground. The world had been more merciful when it had drowned or strangled us at birth.

Once, when I was younger, someone had said it had been a conspiracy—develop a foolproof way to give a couple a child of the sex they wanted, and most of them would naturally choose boys. The population problem would be solved in time without having to resort to harsher methods, and a blow would be leveled at those old feminists who had demanded too much, trying to emasculate men in the process. But I didn't think it had been a conspiracy. It had simply happened, as it was bound to eventually, and the values of society had controlled behavior. After all, why shouldn't a species decide to become one sex, especially if reproduction could be sev-ered from sexuality? People had believed men were better, and had acted on that belief. Perhaps women, given the power, would have done the same.

We retreated to a bar when the sunny weather grew cooler. Elli\*isteed me away from two taverns with "bad elements," and we found ourselves in the doorway of a darkened bar in which several old and middle-aged men had gathered and two pretty boys dressed in leather and silk were plying their trade.

I glanced at the newscreen as I entered; the pale letters flickered, telling me that Bob Arnoldi's last appeal had failed and that he would be executed at the end of the month. This was no surprise; Arnoldi had, after all, killed a woman, and was always under heavy guard. The letters danced on; the President's wife had given birth to her thirteenth child, a boy. The President's best friend, a California millionaire, had been at his side when the announcement was made; the million-aire's power could be gauged by the fact that he had been married three times, and that the prolific First Lady had been one of the former wives.

Ellis and I got drinks at the bar. I kept my distance from one of the pretty boys, who scowled at my short, wavy hair and nestled closer to his patron. We retreated to the shadows and sat down at one of the side tables. The table top was sticky; old cigar butts had been planted on a gray mound in the ashtray. I sipped my bourbon; Ellis, while on the job, was only allowed beer.

The men at the bar were watching the remaining minutes of a football game. Sports of some kind

were always on holo screens in bars, according to Sam; he preferred the old porno-graphic films that were sometimes shown amid war coverage and an occasional boys' choir performance for the pederasts and the more culturally inclined. Ellis looked at the screen and noted that his team was losing; I commented on the team's weaknesses, as I knew I was expected to do.

Ellis rested his elbows on the table. "This all you came for? Just to walk around and then have a drink?"

"That's it. I'm just waiting for my car." I tried to sound nonchalant. "It should be fixed soon."

"Doesn't seem like enough reason to hire an escort."

"Come on, Ellis. Guys like me would have trouble without escorts, especially if we don't know the territory that well."

"True. You don't look that strong." He peered at me a little too intently. "Still, unless you were looking for action, or going to places with a bad element, or waiting for the gangs to come out at night, you could get along. It's in your attitude—you have to look like you can take care of yourself. I've seen guys smaller than you I wouldn't want to fight."

"I like to be safe."

He watched me, as if expecting me to say more.

"Actually, I don't need an escort as much as I like to have a companion—somebody to talk to. I don't see that many people."

"It's your money."

The game had ended and was being subjected to loud analysis by the men at the bar; their voices suddenly died. A man behind me sucked in his breath as the clear voice of a woman filled the room.

I looked at the holo. Rena Swanson was reciting the news, leading with the Arnoldi story, following that with the an-nouncement of the President's new son. Her aged, wrinkled face hovered over us; her kind brown eyes promised us comfort. Her motherly presence had made her program one of the most popular on the holo. The men around me sat si-lently, faces upturned, worshipping her—the Woman, the Other, someone for whom part of them still yearned.

We got back to Marcello's just before dark. As we ap-proached the door, Ellis suddenly clutched my shoulder. "Wait a minute, Joe."

I didn't move at first; then I reached out and carefully pushed his arm away. My shoulders hurt and a tension head-ache, building all day, had finally taken hold, its claws gripping my temples. "Don't touch me." I had been about to plead, but caught myself in time; attitude, as Ellis had told me himself, was important.

"There's something about you. I can't figure you out."

"Don't try." I kept my voice steady. "You wouldn't want me to complain to your boss, would you? He might not hire you again. Escorts have to be trusted."

He was very quiet. I couldn't see his dark face clearly in the fading light, but I could sense that he was weighing the worth of a confrontation with me against the chance of losing his job. My face was hot, my mouth dry. I had spent too much time with him, given him too many chances to notice subtly wrong gestures. I continued to stare directly at him, wondering if his greed would win out over practicality.

"Okay," he said at last, and opened the door.

I was charged more than I had expected to pay, but did not argue about the fee. I pressed a few coins on Ellis; he took them while refusing to look at me. He knows, I thought then; he knows and he's letting me go. But I might have imagined that, seeing kindness where there was none.

\* \* \*

I took a roundabout route back to Sam's, checking to make sure no one had followed me, then pulled off the road to change the car's license plate, concealing my own under my shirt.

Sam's store stood at the end of the road, near the foot of my mountain. Near the store, a small log cabin had been built. I had staked my claim to most of the mountain, buying up the land to make sure it remained undeveloped, but the outside world was already moving closer.

Sam was sitting behind the counter, drumming his fingers as music blared. I cleared my throat and said hello.

"Joe?" His watery blue eyes squinted. "You're late, boy."

"Had to get your car fixed. Don't worry—I paid for it already. Thanks for letting me rent it again." I counted out my coins and pressed them into his dry, leathery hand.

"Any time, son." The old man held up the coins, peering at each one with his weak eyes. "Don't look like you'll get home tonight. You can use the sofa there—I'll get you a nightshirt."

"I'll sleep in my clothes." I gave him an extra coin.

He locked up, hobbled toward his bedroom door, then turned. "Get into town at all?"

"No." I paused. "Tell me something, Sam. You're old enough to remember. What was it really like before?" I had never asked him in all the years I had known him, avoiding intimacy of any kind, but suddenly I wanted to know.

"I'll tell you, Joe." He leaned against the doorway. "It wasn't all that different. A little softer around the edges, maybe, quieter, not as mean, but it wasn't all that different. Men always ran everything. Some say they didn't, but they had all the real power—sometimes they'd dole a little of it out to the girls, that's all. Now we don't have to anymore."

I had been climbing up the mountain for most of the morning, and had left the trail, arriving at my decoy house before noon. Even Sam believed that the cabin in the clearing was my dwelling. I tried the door, saw that it was still locked, then continued on my way.

My home was farther up the slope, just out of sight of the cabin. I approached my front door, which was almost invisible near the ground; the rest of the house was concealed under slabs of rock and piles of deadwood. I stood still, letting a hidden camera lens get a good look at me. The door swung open.

"Thank God you're back," Julia said as she pulled me inside and closed the door. "I was so worried. I thought you'd been caught and they were coming for me."

"It's all right. I had some trouble with Sam's car, that's all."

She looked up at me; the lines around her mouth deepened. "I wish you wouldn't go." I took off the pack loaded with the tools and supplies unavailable at Sam's store. Julia glanced at the pack resentfully. "It isn't worth it."

"You're probably right." I was about to tell her of my own trip into town, but decided to wait until later.

We went into the kitchen. Her hips were wide under her pants; her large breasts bounced as she walked. Her face was still pretty, even after all the years of hiding, her lashes thick and curly, her mouth delicate. Julia could not travel in the world as it was; no clothing, no disguise, could hide her.

I took off my jacket and sat down, taking out my card, and my papers. My father had given them to me—the false name, the misleading address, the identification of a male—after I had pleaded for my own life. He had built my hideaway; he had risked everything for me. Give the world a choice, he had said, and women will be the minority, maybe even die out completely; perhaps we can only love those like

ourselves. He had looked hard as he said it, and then he had patted me on the head, sighing as though he regretted the choice. Maybe he had. He had chosen to have a daughter, after all.

I remembered his words. "Who knows?" he had asked. "What is it that made us two kinds who have to work together to get the next batch going? Oh, I know about evolution, but it didn't have to be that way, or any way. It's curious."

"It can't last," Julia said, and I did not know if she meant the world, or our escape from the world.

There would be no Eves in their Eden, I thought. The visit to town had brought it all home to me. We all die, but we go with a conviction about the future; my extinction would not be merely personal. Only traces of the feminine would linger—an occasional expression, a posture, a feeling—in the flat-breasted male form. Love would express itself in fruitless unions, divorced from reproduction; human affections are flexible.

I sat in my home, in my prison, treasuring the small freedom I had, the gift of a man, as it seemed such freedom had always been for those like me, and wondered again if it could have been otherwise.

**TRINITY** Nancy Kress

*We return to the subject of God in this novella about a scientific project that attempts to bring humans into verifiable contact with the Greater Being. It's a bold, even fantastic, idea... and one that could give rise to some very human dangers.*

*Nancy Kress's first novel was The Prince of Morning Bells. A collection of her shorter fiction will be published soon.*

"Lord, I believe; help Thou mine unbelief!"

—Mark 9:24

At first I didn't recognize Devrie.

Devrie—I didn't recognize *Devrie*. Astonished at myself, I studied the wasted figure standing in the middle of the bare reception room: arms like wires, clavicle sharply outlined, head shaved, dressed in that ugly long tent of light-weight gray. God knew what her legs looked like under it. Then she smiled, and it was Devrie.

"You look like shit."

"Hello, Seena. Come on in."

"I am in."

"Barely. It's not catching, you know."

"Stupidity fortunately isn't," I said and closed the door behind me. The small room was too hot; Devrie would need the heat, of course, with almost no fat left to insulate her bones and organs. Next to her I felt huge, although I am not. Huge, hairy, sloppy-breasted.

"Thank you for not wearing bright colors. They do affect me."

"Anything for a sister," I said, mocking the old childhood formula, the old sentiment. But Devrie was too quick to think it was only mockery; in that, at least, she had not changed. She clutched my arm and her fingers felt like chains, or talons.

"You found him. Seena, you found him."

"I found him."

"Tell me," she whispered.

"Sit down first, before you fall over. God, Devrie, don't you eat at all?"

"*Tell me*," she said. So I did.

Devrie Caroline Konig had admitted herself to the Institute of the Biological Hope on the Caribbean island of Dominica eleven months ago, in late November of 2017, when her age was 23 years and 4 months. I am precise about this because it is all I can be sure of. I need the precision. The Institute of the Biological Hope is not precise; it is a mongrel, part research laboratory in brain sciences, part monastery, part school for training in the discipline of the mind. That made my baby sister guinea pig, postulant, freshman. She had always been those things, but, until now, sequentially. Apparently so had many other people, for when eccentric Nobel Prize winner James Arthur Bohentin had founded his Institute, he had been able to fund it, although precariously. But in that it did not differ from most private scientific research centers.

Or most monasteries.

I wanted Devrie out of the Institute of the Biological Hope.

"It's located on Dominica," I had said sensibly—what an ass I had been—to an unwasted Devrie a year ago, "because the research procedures there fall outside United States laws concerning the safety of research subjects. Doesn't that *tell* you something, Devrie? Doesn't that at least give you pause? In New York, it would be illegal to do to anyone what Bohentin does to his people."

"Do you know him?" she had asked.

"I have met him. Once."

"What is he like?"

"Like stone."

Devrie shrugged, and smiled. "All the participants in the Institute are willing. Eager."

"That doesn't make it ethical for Bohentin to destroy them. Ethical or legal."

"It's legal on Dominica. And in thinking you know better than the participants what they should risk their own lives for, aren't you playing God?"

"Better me than some untrained fanatic who offers himself up like an exalted Viking hero, expecting Valhalla."

"You're an intellectual snob, Seena."

"I never denied it."

"Are you sure you aren't really objecting not to the Institute's dangers but to its purpose? Isn't the 'Hope' part what really bothers you?"

"I don't think scientific method and pseudo-religious mush mix, no. I never did. I don't think it leads to a perception of God."

"The holotank tapes indicate it leads to a perception of *something* the brain hasn't encountered before," Devrie said, and for a moment I was silent.

I was once, almost, a biologist. I was aware of the legitimate studies that formed the basis for Bohentin's megalomania: the brain wave changes that accompany anorexia nervosa, sensory deprivation, biological feedback, and neurotransmitter stimulants. I have read the historical accounts, some merely pathetic but some disturbingly not, of the Christian mystics who achieved rapture through the mortification

of the flesh and the Eastern mystics who achieved anesthesia through the control of the mind, of the faith healers who succeeded, of the carcinomas shrunk through trained will. I knew of the research of focused clairvoyance during orgasm, and of what happens when neurotransmitter number and speed are increased chemically.

And I knew all that was known about the twin trance.

Fifteen years earlier, as a doctoral student in biology, I had spent one summer replicating Sunderwirth's pioneering study of drug-enhanced telepathy in identical twins. My results were positive, except that within six months all eight of my research subjects had died. So had Sunderwirth's. Twin-trance research became the cloning controversy of the new decade, with the same panicky cycle of public outcry, legal restrictions, religious misunderstandings, fear, and demagoguery. When I received the phone call that the last of my subjects was dead—cardiac arrest, no history of heart disease, forty-three Goddamn years old—I locked myself in my apartment, with the lights off and my father's papers clutched in my hand, for three days. Then I resigned from the neurology department and became an entomologist. There is no pain in classifying dead insects.

"There is something *there*," Devrie had repeated. She was holding the letter sent to our father, whom someone at the Institute had not heard was dead. "It says the holotank tapes—"

"So there's something there," I said. "So the tanks are picking up some strange radiation. Why call it 'God'?"

"Why not call it God?"

"Why not call it Rover? Even if I grant you that the tape pattern looks like a presence—which I don't—you have no way of knowing that Bohentin's phantom isn't, say, some totally ungodlike alien being."

"But neither do I know that it *is*."

"Devrie—"

She had smiled and put her hands on my shoulders. She had—has, has always had—a very sweet smile. "Seena. *Think*. If the Institute can prove rationally that God exists—can prove it to the intellectual mind, the doubting Thomases who need something concrete to study... faith that doesn't need to be taken on faith..."

She wore her mystical face, a glowing softness that made me want to shake the silliness out of her. Instead I made some clever riposte, some sarcasm I no longer remember, and reached out to ruffle her hair. Big-sisterly, patronizing, think-ing I could deflate her rapturous interest with the pin-prick of ridicule. God, I was an ass. It hurts to remember how big an ass I was.

A month and a half later Devrie committed herself and half her considerable inheritance to the Institute of the Biological Hope.

"Tell me," Devrie whispered. The Institute had no windows; outside I had seen grass, palm trees, butterflies floating in the sunshine, but inside here in the bare gray room there was nowhere to look but at her face.

"He's a student in a Master's program at a third-rate college in New Hampshire. He was adopted when he was two, nearly three, in March of 1997. Before that he was in a government-run children's home. In Boston, of course. The adopting family, as far as I can discover, never was told he was anything but one more toddler given up by somebody for adoption."

"Wait a minute," Devrie said. "I need... a minute."

She had turned paler, and her hands trembled. I had recited the information as if it were no more than an exhibit listing at my museum. Of course she was rattled. I wanted her rattled. I wanted her out.

Lowering herself to the floor, Devrie sat cross-legged and closed her eyes. Concentration spread over her face, but a concentration so serene it barely deserved that name. Her breathing slowed, her color freshened, and when she opened her eyes, they had the rested energy of a person who has just slept eight hours in mountain air. Her face even looked plumper, and an EEG, I guessed, would show damn near alpha waves. In her year at the Institute she must have mastered quite an array of biofeedback techniques to do that, so fast and with such a malnourished body.

"Very impressive," I said sourly.

"Seena—have you seen him?"

"No. All this is from sealed records."

"How did you get into the records?"

"Medical and governmental friends."

"Who?"

"What do you care, as long as I found out what you wanted to know?"

She was silent. I knew she would never ask me if I had obtained her information legally or illegally; it would not occur to her to ask. Devrie, being Devrie, would assume it had all been generously offered by my modest museum connections and our dead father's immodest research connections. She would be wrong.

"How old is he now?"

"Twenty-four years last month. They must have used your two-month tissue sample."

"Do you think Daddy knew where the... baby went?"

"Yes. Look at the timing—the child was normal and healthy, yet he wasn't adopted until he was nearly three. The researchers kept track of him, all right; they kept all six clones in a government-controlled home where they could monitor their development as long as humanely possible. The same-sex clones were released for adoption after a year, but they hung onto the cross-sex ones until they reached an age where they would become harder to adopt. They undoubtedly wanted to study *them* as long as they could. And even after the kids were released for adoption, the researchers held off publishing until all six were placed and the records sealed. Dad's group didn't publish until April, 1998, remember. By the time the storm broke, the babies were out of its path, and anonymous."

"And the last," Devrie said.

"And the last," I agreed, although of course the researchers hadn't foreseen *that*. So few in the scientific community had foreseen that. Offense against God and man, Satan's work, natter natter. Watching my father's suddenly stooped shoulders and stricken eyes, I had thought how ugly public revulsion could be and had nobly resolved—how had I thought of it then? So long ago—resolved to snatch the banner of pure science from my fallen father's hand. Another time that I had been an ass. Five years later, when it had been my turn to feel the ugly scorching of public revulsion, I had broken, left neurological research, and fled down the road that led to the Museum of Natural History, where I was the curator of ants fossilized in amber and moths pinned securely under permalex.

"The other four clones," Devrie said, "the ones from that university in California that published almost simultaneously with Daddy—"

"I don't know. I didn't even try to ask. It was hard enough in Cambridge."

"Me," Devrie said wonderingly. "He's *me*."

"Oh, for—Devrie, he's your twin. No more than that. No—actually less than that. He shares your genetic material exactly as an identical twin would, except for the Y chromosome, but he shares none of



the congenital or environmental influences that shaped your personality. There's no mystical replication of spirit in cloning. He's merely a twin who got born eleven months late!"

She looked at me with luminous amusement. I didn't like the look. On that fleshless face, the skin stretched so taut that the delicate bones beneath were as visible as the veins of a moth wing, her amusement looked ironic. Yet Devrie was never ironic. Gentle, passionate, trusting, a little stupid, she was not capable of irony. It was beyond her, just as it was beyond her to wonder why I, who had fought her entering the Institute of the Biological Hope, had brought her this information now. Her amusement was one-layered, and trusting.

God's fools, the Middle Ages had called them.

"Devrie," I said, and heard my own voice unexpectedly break, "leave here. It's physically not safe. What are you down to, ten percent body fat? Eight? Look at yourself, you can't hold body heat, your palms are dry, you can't move quickly without getting dizzy. Hypotension. What's your heart-beat? Do you still menstruate? It's insane."

She went on smiling at me. God's fools don't need menstruation. "Come with me, Seena. I want to show you the Institute."

"I don't want to see it."

"Yes. This visit you should see it."

"Why this visit?"

"Because you *are* going to help me get my clone to come here, aren't you? Or else why did you go to all the trouble of locating him?"

I didn't answer. She still didn't see it.

Devrie said, "'Anything for a sister.' But you were always more like a mother to me than a sister." She took my hand and pulled herself off the floor. So had I pulled her up to take her first steps, the day after our mother died in a plane crash at Orly. Now Devrie's hand felt cold. I imprisoned it and counted the pulse.

"Bradycardia."

But she wasn't listening.

The Institute was a shock. I had anticipated the laboratories: monotonous gray walls, dim light, heavy soundproofing, minimal fixtures in the ones used for sensory dampening; high-contrast textures and colors, strobe lights, quite good sound equipment in those for sensory arousal. There was much that Devrie, as subject rather than researcher, didn't have authority to show me, but I deduced much from what I did see. The dormitories, divided by sex, were on the sensory-dampening side. The subjects slept in small cells, ascetic and chaste, that reminded me of an abandoned Carmelite convent I had once toured in Belgium. That was the shock: the physical plant felt scientific, but the atmosphere did not.

There hung in the gray corridors a wordless peace, a feeling so palpable I could feel it clogging my lungs. No. "Peace" was the wrong word. Say "peace" and the picture is pastoral, lazy sunshine and dreaming woods. This was not like that at all. The research subjects—students? postulants?—lounged in the corridors outside closed labs, waiting for the next step in their routine. Both men and women were anorectic, both wore gray bodysuits or caftans, both were fined down to an otherworldly ethereality when seen from a distance and a malnourished asexuality when seen up close. They talked among themselves in low voices, sitting with backs against the wall or stretched full-length on the carpeted floor, and on all their faces I saw the same luminous patience, the same certainty of being very near to something exciting that they nonetheless could wait for calmly, as long as necessary.

"They look," I said to Devrie, "as if they're waiting to take an exam they already know they'll ace."

She smiled. "Do you think so? I always think of us as travelers waiting for a plane, boarding passes stamped for Eternity."

She was actually serious. But she didn't in fact wear the same expression as the others; hers was far more intense. If they were travelers, she wanted to pilot.

The lab door opened and the students brought themselves to their feet. Despite their languid movements, they looked sharp: sharp protruding clavicles, bony chins, angular unpadded elbows that could chisel stone.

"This is my hour for biofeedback manipulation of drug effects," Devrie said. "Please come watch."

"I'd sooner watch you whip yourself in a twelfth-century monastery."

Devrie's eyes widened, then again lightened with that lumi-nous amusement. "It's for the same end, isn't it? But they had such unsystematic means. Poor struggling God-searchers. I wonder how many of them made it."

I wanted to strike her. ' 'Devrie—"

"If not biofeedback, what would you like to see?"

"You out of here."

"What else?"

There was only one thing: the holotanks. I struggled with the temptation, and lost. The two tanks stood in the middle of a roomy lab carpeted with thick gray matting and completely enclosed in a Faraday cage. That Devrie had a key to the lab was my first clue that my errand for her had been known, and discussed, by someone higher in the Institute. Research subjects do not carry keys to the most delicate brain-perception equipment in the world. For this equipment Bohentin had received his Nobel.

The two tanks, independent systems, stood as high as my shoulder. The ones I had used fifteen years ago had been smaller. Each of these was a cube, opaque on its bottom half, which held the sensing apparatus, computerized simulators, and recording equipment; clear on its top half, which was filled with the transparent fluid out of whose molecules the simulations would form. A separate sim would form for each subject, as the machine sorted and mapped all the electromagnetic radiation received and processed by each brain. *All* that each brain perceived, not only the visuals; the holograph equipment was capable of picking up all wavelengths that the brain did, and of displaying their brain-processed analogues as three-dimensional images floating in a clear womb. When all other possible sources of radiation were filtered out except for the emanations from the two subjects themselves, what the sims showed was what kinds of activity were coming from—and hence going on in—the other's brain. That was why it worked best with identical twins in twin trance: no structural brain differences to adjust for. In a rawer version of this holotank, a rawer version of myself had pioneered the recording of twin trances. The UCIC, we had called it then: What you see, I see.

What I had seen was eight autopsy reports.

"We're so *close*," Devrie said. "Mona and Marlene"— she waved a hand toward the corridor but Mona and Marlene, whichever two they had been, had gone—"had taken KX3, that's the drug that—"

"I know what it is," I said, too harshly. KX3 reacts with one of the hormones overproduced in an anorectic body. The combination is readily absorbed by body fat, but in a body without fat, much of it is absorbed by the brain.

Devrie continued, her hand tight on my arm. "Mona and Marlene were controlling the neural reactions with biofeed-back, pushing the twin trance higher and higher, working it. Dr. Bohentin was monitoring the holotanks. The sims were incredibly detailed—everything each twin perceived in the perceptions of the other, in all wavelengths. Mona and Marlene forced their neurotransmission level even higher and then,

in the tanks"—Devrie's face glowed, the mystic-rapture look—"a completely third sim formed. Completely separate. A third *presence*."

I stared at her.

"It was recorded in *both* tanks. It was shadowy, yes, but it was *there*. A third presence that can't be perceived except through another human's electromagnetic presence, and then only with every drug and trained reaction and arousal mode and the twin trance all pushing the brain into a supraheightened state. A third presence!"

"Isotropic radiation. Bohentin fluffed the pre-screening program and the computer hadn't cleared the background microradiation—" I said, but even as I spoke I knew how stupid that was. Bohentin didn't make mistakes like that, and isotropic radiation simulates nowhere close to the way a presence does. Devrie didn't even bother to answer me.

This, then, was what the rumors had been about, the rumors leaking for the last year out of the Institute and through the scientific community, mostly still scoffed at, not yet picked up by the popular press. This. A verifiable, repli-cable third presence being picked up by holography. Against all reason, a long shiver went over me from neck to that cold place at the base of the spine.

"There's more," Devrie said feverishly. "They *felt* it. Mona and Marlene. Both said afterwards that they could feel it, a huge presence filled with light, but they couldn't quite reach it. Damn—they couldn't reach it, Seena! They weren't playing off each other enough, weren't close enough. Weren't, despite the twin trance, *melded* enough."

"Sex," I said.

"They tried it. The subjects are all basically heterosexual. They inhibit."

"So go find some homosexual God-yearning anorectic in-cestuous twins!"

Devrie looked at me straight. "I need him. Here. He *is* me."

I exploded, right there in the holotank lab. No one came running in to find out if the shouting was dangerous to the tanks, which was my second clue that the Institute knew very well why Devrie had brought me there. "Damn it to hell, he's a human being, not some chemical you can just order up because you need it for an experiment! You don't have the right to expect him to come here, you didn't even have the right to tell anyone that he exists, but that didn't stop you, did it? There are still anti-bioengineering groups out there in the real world, religious split-brains who—how *dare* you put him in any danger? How dare you even presume he'd be interested in this insane mush?"

"He'll come," Devrie said. She had not changed expression.

"How the hell do you know?"

"He's me. And I want God. He will, too."

I scowled at her. A fragment of one of her poems, a thing she had written when she was fifteen, came to me: "Two humans species/Never one—/One aching for God/One never." But she had been fifteen then. I had assumed that the senti-ment, as adolescent as the poetry, would pass.

I said, "What does Bohentin think of this idea of importing your clone?"

For the first time she hesitated. Bohentin, then, was dubi-ous. "He thinks it's rather a long shot."

"You could phrase it that way."

"But I know he'll want to come. Some things you just know, Seena, beyond rationality. And besides—" She hesi-tated again, and then went on. "I have left half my inheri-tance from Daddy, and the income on the trust from Mummy."

"Devrie. God, Devrie—you'd *buy* him?"

For the first time she looked angry. "The money would be just to get him here, to see what is involved. Once he sees, he'll want this as much as I do, at any price! What price can you put on God? I'm not 'buying' his life—I'm offering him the way to *find* life. What good is breathing, existing, if there's no purpose to it? Don't you realize how many centu-ries, in how many ways, people have looked for that light-filled presence and never been able to be *sure!*} And now we're almost there, Seena, I've seen it for myself—*almost there*. With verifiable, scientifically-controlled means. Not subjective faith this time—scientific data, the same as for any other actual phenomenon. This research stands now where research into the atom stood fifty years ago. Can you touch a quark? But it's there! And my clone can be a part of it, can *be* it, how can you talk about the money buying him under circumstances like that!"

I said slowly, "How do you know that whatever you're so close to is God?" But that was sophomoric, of course, and she was ready for it. She smiled warmly.

'What does it matter what we call it? Pick another label if it will make you more comfortable.'

I took a piece of paper from my pocket. "His name is

Keith Torellen. He lives in Indian Falls, New Hampshire. Address and mailnet number here. Good luck, Devrie." I turned to go.

"Seena! I can't go!"

She couldn't, of course. That was the point. She barely had the strength in that starved, drug-battered body to get through the day, let alone to New Hampshire. She needed the sensory-controlled environment, the artificial heat, the chemical moni-toring. "Then send someone from the Institute. Perhaps Bohentin will go."

"*Bohentin?!?*" she said, and I knew that was impossible; Bohentin had to remain officially ignorant of this sort of recruiting. Too many U.S. laws were involved. In addition, Bohentin had no persuasive skills; people as persons and not neurologies did not interest him. They were too far above chemicals and too far below God.

Devrie looked at me with a kind of level fury. "This is really why you found him, isn't it? So I would have to stop the drug program long enough to leave here and go get him. You think that once I've gone back out into the world either the build-up effects in the brain will be interrupted or else the spell will be broken and I'll have doubts about coming back here!"

"Will you listen to yourself? 'Out into the world.' You sound like some archaic nun in a cloistered order!"

"You always did ridicule anything you couldn't under-stand," Devrie said icily, turned her back on me, and stared at the empty holotanks. She didn't turn when I left the lab, closing the door behind me. She was still facing the tanks, her spiny back rigid, the piece of paper with Keith Torellen's address clutched in fingers delicate as glass.

In New York the museum simmered with excitement. An unexpected endowment had enabled us to buy the contents of a small, very old museum located in a part of Madagascar not completely destroyed by the African Horror. Crate after crate of moths began arriving in New York, some of them collected in the days when naturalists-gentlemen shot jungle moths from the trees using dust shot. Some species had been extinct since the Horror and thus were rare; some were the brief mutations from the bad years afterward and thus were even rarer. The museum staff uncrated and exclaimed.

"Look at this one," said a young man, holding it out to me. Not on my own staff, he was one of the specialists on loan to us—DeFabio or DeFazio, something like that. He was very handsome. I looked at the moth he showed me, all pale wings outstretched and pinned to black silk. "A perfect *Thysania Africana*. *Perfect*."

"Yes."

"You'll have to loan us the whole exhibit, in a few years."

"Yes," I said again. He heard the tone in my voice and glanced up quickly. But not quickly enough—my face was all professional interest when his gaze reached it. Still, the pro-fessional interest had not fooled him; he had heard the per-functory note. Frowning, he turned back to the moths.

By day I directed the museum efficiently enough. But in the evenings, home alone in my apartment, I found myself wandering from room to room, touching objects, unable to settle to work at the oversize teak desk that had been my father's, to the reports and journals that had not. His had dealt with the living, mine with the ancient dead—but I had known that for years. The fogginess of my evenings bothered me.

"Faith should not mean fogginess."

Who had said that? Father, of course, to Devrie, when she had joined the dying Catholic Church. She had been thirteen years old. Skinny, defiant, she had stood clutching a black rosary from God knows where, daring him from scared dark eyes to forbid her. Of course he had not, thinking, I suppose, that Heaven, like any other childhood fever, was best left alone to burn out its course.

Devrie had been received into the Church in an overdecorated chapel, wearing an overdecorated dress of white lace and carrying a candle. Three years later she had left, dressed in a magenta body suit and holding the keys to Father's safe, which his executor had left unlocked after the funeral. The will had, of course, made me Devrie's guardian. In the three years Devrie had been going to Mass, I had discovered that I was sterile, divorced my second husband, finished my work in entomology, accepted my first position with a museum, and entered a drastically premature menopause.

That is not a flip nor random list.

After the funeral, I sat in the dark in my father's study, in his maroon leather chair and at his teak desk. Both felt oversize. All the lights were off. Outside it rained; I heard the steady beat of water on the window, and the wind. The dark room was cold. In my palm I held one of my father's research awards, a small abstract sculpture of a double helix, done by Harold Landau himself. It was very heavy. I couldn't think what Landau had used, to make it so heavy. I couldn't think, with all the noise from the rain. My father was dead, and I would never bear a child.

Devrie came into the room, leaving the lights off but bringing with her an incandescent rectangle from the door-way. At sixteen she was lovely, with long brown hair in the masses of curls again newly fashionable. She sat on a low stool beside me, all that hair falling around her, her face white in the gloom. She had been crying.

"He's gone. He's really gone. I don't believe it yet."

"No."

She peered at me. Something in my face, or my voice, must have alerted her; when she spoke again it was in that voice people use when they think your grief is understandably greater than theirs. A smooth dark voice, like a wave.

"You still have me, Seena. We still have each other."

I said nothing.

"I've always thought of you more as my mother than my sister, anyway. You took the place of Mother. You've been a mother to at least *me*."

She smiled and squeezed my hand. I looked at her face—so young, so pretty—and I wanted to hit her. I didn't want to be her mother; I wanted to be her. All her choices lay ahead of her, and it seemed to me that self-indulgent night as if mine were finished. I could have struck her.

"Seena—"

"Leave me alone! Can't you ever leave me alone? All my life you've been dragging behind me; why don't *you* die and finally leave me alone!"

We make ourselves pay for small sins more than large ones. The more trivial the thrust, the longer we're haunted by memory of the wound.

I believe that.

Indian Falls was out of another time: slow, quiet, safe. The Aviscounter at the airport rented not personal guards but cars, and the only shiny store on Main Street sold wilderness equipment. I suspected that the small state college, like the town, traded mostly on trees and trails. That Keith Torellen was trying to take an academic degree *here* told me more about his adopting family than if I had hired a professional information service.

The house where he lived was shabby, paint peeling and steps none too sturdy. I climbed them slowly, thinking once again what I wanted to find out.

Devrie would answer none of my messages on the mailnet. Nor would she accept my phone calls. She was shutting me out, in retaliation for my refusing to fetch Torellen for her. But Devrie would discover that she could not shut me out as easily as that; we were sisters. I wanted to know if she had contacted Torellen herself, or had sent someone from the Institute to do so.

If neither, then my visit here would be brief and anonymous; I would leave Keith Torellen to his protected ignorance and shabby town. But if he *had* seen Devrie, I wanted to discover if and what he had agreed to do for her. It might even be possible that he could be of use in convincing Devrie of the stupidity of what she was doing. If he could be used for that, I would use him.

Something else: I was curious. This boy was my brother—nephew? no, brother—as well as the result of my father's rational mind. Curiosity prickled over me. I rang the bell.

It was answered by the landlady, who said that Keith was not home, would not be home until late, was "in rehearsal."

"Rehearsal?"

"Over to the college. He's a student and they're putting on a play."

I said nothing, thinking.

"I don't remember the name of the play," the landlady said. She was a large woman in a faded garment, dress or robe. "But Keith says it's going to be real good. It starts this weekend." She laughed. "But you probably already know all that! George, my husband George, he says I'm forever telling people things they already know!"

"How would I know?"

She winked at me. "Don't you think I got eyes? Sister, or cousin? No, let me guess—older sister. Too much alike for cousins."

"Thank you," I said. "You've been very helpful."

"Not sister!" She clapped her hand over her mouth, her eyes shiny with amusement. "You're checking up on him, ain't you? You're his mother! I should of seen it right off!"

I turned to negotiate the porch steps.

"They rehearse in the new building, Mrs. Torellen," she called after me. "Just ask anybody you see to point you in the right direction."

"Thank you," I said carefully.

Rehearsal was nearly over. Evidently it was a dress re-hearsal; the actors were in period costume and the director did not interrupt. I did not recognize the period or the play. Devrie had been interested in theater: I was not. Quietly I took a seat in the darkened back row and waited for the pretending to end.

Despite wig and greasepaint, I had no trouble picking out Keith Torellen. He moved like Devrie: quick, light move-ments, slightly pigeon-toed. He had her height and, given the differences of a male body, her slenderness. Sitting a the-ater's length away, I might have been seeing a male Devrie.

But seen up close, his face was mine.

Despite the landlady, it was a shock. He came toward me across the theater lobby, from where I had sent for him, and I saw the moment he too struck the resemblance. He stopped dead, and we stared at each other. Take Devrie's genes, spread them over a face with the greater bone surface, larger features, and coarser skin texture of a man—and the result was my face. Keith had scrubbed off his make-up and re-moved his wig, exposing brown curly hair the same shade Devrie's had been. But his face was mine.

A strange emotion, unnamed and hot, seared through me.

"Who are *you*! Who the hell *are* you?"

So no one had come from the Institute after all. Not Devrie, not any one.

"You're one of them, aren't you?" he said; it was almost a whisper. "One of my real family?"

Still gripped by the unexpected force of emotion, still dumb, I said nothing. Keith took one step toward me. Suspi-cion played over his face—Devrie would not have been suspicious—and vanished, replaced by a slow painful flush of color.

"You are. You *are* one. Are you... are you my mother?"

I put out a hand against a stone post. The lobby was all stone and glass. Why were all theater lobbies stone and glass? Architects had so little damn imagination, so little sense of the bizarre.

"No! I am not your mother!"

He touched my arm. "Hey, are you okay? You don't look good. Do you need to sit down?"

His concern was unexpected, and touching. I thought that he shared Devrie's genetic personality, and that Devrie had always been hypersensitive to the body. But this was not Devrie. His hand on my arm was stronger, firmer, warmer than Devrie's. I felt giddy, disoriented. This was not Devrie.

"A mistake," I said unsteadily. "This was a mistake. I should not have come. I'm sorry. My name is Dr. Seena Konig and I am a... relative of yours, but I think this now is a mistake. I have your address and I promise that I'll write you about your family, but now I think I should go." Write some benign lie, leave him in ignorance. This was a mistake.

But he looked stricken, and his hand tightened on my arm. "You can't! I've been searching for my biological family for two years! You can't just go!"

We were beginning to attract attention in the theater lobby. Hurrying students eyed us sideways. I thought irrelevantly how different they looked from the "students" at the Insti-tute, and with that thought regained my composure. This was a student, a boy—"you can't!" a boyish protest, and boyish panic in his voice—and not the man-Devrie-me he had seemed a foolish moment ago. He was nearly twenty years my junior. I smiled at him and removed his hand from my arm.

"Is there somewhere we can have coffee?"

"Yes. Dr..."

"Seena," I said. "Call me Seena."

Over coffee, I made him talk first. He watched me anx-iously over the rim of his cup, as if I might

vanish, and I listened to the words behind the words. His adopting family was the kind that hoped to visit the Grand Canyon but not Europe, go to movies but not opera, aspire to college but not to graduate work, buy wilderness equipment but not wilder-ness. Ordinary people. Not religious, not rich, not unusual. Keith was the only child. He loved them.

"But at the same time I never really felt I belonged," he said, and looked away from me. It was the most personal thing he had knowingly revealed, and I saw that he regretted it. Devrie would not have. More private, then, and less trusting. And I sensed in him a grittiness, a tougher aware-ness of the world's hardness, than Devrie had ever had—or needed to have. I made my decision. Having disturbed him thus far, I owed him truth—but not the whole truth.

"Now you tell me," Keith said, pushing away his cup. "Who were my parents? Our parents? Are you my sister?"

"Yes."

"Our parents?"

"Both are dead. Our father was Dr. Richard Konig. He was a scientist. He—" But Keith had recognized the name. His readings in biology or history must have been more extensive than I would have expected. His eyes widened, and I suddenly wished I had been more oblique.

"Richard Konig. He's one of those scientists that were involved in that bioengineering scandal—"

"How did you learn about that? It's all over and done with. Years ago."

"Journalism class. We studied how the press handled it, especially the sensationalism surrounding the cloning thing twenty years—"

I saw the moment it hit him. He groped for his coffee cup, clutched the handle, didn't raise it. It was empty anyway. And then what I said next shocked me as much as anything I have ever done.

"It was Devrie," I said, and heard my own vicious plea-sure, "*Devrie* was the one who wanted me to tell you!"

But of course he didn't know who Devrie was. He went on staring at me, panic in his young eyes, and I sat frozen. That tone I heard in my own voice when I said "Devrie," that vicious pleasure that it was she and not I who was hurting him...

"Cloning," Keith said. "Konig was in trouble for claim-ing to have done illegal cloning. Of humans." His voice had held so much dread that I fought off my own dread and tried to hold myself steady to his need.

"It's illegal now, but not then. And the public badly misunderstood. All that sensationalism—you were right to use that word, Keith—covered up the fact that there is noth-ing abnormal about producing a fetus from another diploid cell. In the womb, identical twins—"

"Am I a clone?"

"Keith—"

*"Am I a clone?"*

Carefully I studied him. This was not what I had intended, but although the fear was still in his eyes, the panic had gone. And curiosity—Devrie's curiosity, and her eagerness—they were there as well. This boy would not strike me, nor stalk out of the restaurant, nor go into psychic shock.

"Yes. You are."

He sat quietly, his gaze turned inward. A long moment passed in silence.

"Your cell?"



"No. My—our sister's. Our sister Devrie."

Another long silence. He did not panic. Then he said softly, "Tell me."

Devrie's phrase.

"There isn't much to tell, Keith. If you've seen the media accounts, you know the story, and also what was made of it. The issue then becomes how you feel about what you saw. Do you believe that cloning is meddling with things man should best leave alone?"

"No. I don't."

I let out my breath, although I hadn't known I'd been holding it. "It's actually no more than delayed twinning, followed by surrogate implantation. A zygote—"

"I know all that," he said with some harshness, and held up his hand to silence me. I didn't think he knew that he did it. The harshness did not sound like Devrie. To my ears, it sounded like myself. He sat thinking, remote and troubled, and I did not try to touch him.

Finally he said, "Do my parents know?"

He meant his adoptive parents. "No."

"Why are you telling me now? Why did you come?"

"Devrie asked me to."

"She needs something, right? A kidney? Something like that?"

I had not foreseen that question. He did not move in a class where spare organs were easily purchasable. "No. Not a kidney, not any kind of biological donation." A voice in my mind jeered at that, but I was not going to give him any clues that would lead to Devrie. "She just wanted me to find you."

"Why didn't she find me herself? She's my age, right?"

"Yes. She's ill just now and couldn't come."

"Is she dying?"

"No!"

Again he sat quietly, finally saying, "No one could tell me anything. For two years I've been searching for my mother, and not one of the adoptee-search agencies could find a single trace. Not one. Now I see why. Who covered the trail so well?"

"My father."

"I want to meet Devrie."

I said evenly, "That might not be possible."

"Why not?"

"She's in a foreign hospital. Out of the country. I'm sorry."

"When does she come home?"

"No one is sure."

"What disease does she have?"

*She's sick for God*, I thought, but aloud I said, not thinking it through, "A brain disease."

Instantly I saw my own cruelty. Keith paled, and I cried, "No, no, nothing you could have as well! Truly, Keith, it's not—she took a bad fall. From her hunter."

"Her hunter," he said. For the first time, his gaze flickered over my clothing and jewelry. But would he even recognize how expensive they were? I doubted it. He wore a synthetic, deep-pile jacket with a tear at one shoulder and a cheap wool hat, dark blue, shapeless with age. From long experience I recognized his gaze: uneasy, furtive, the expression of a man glimpsing the financial gulf between what he had assumed were equals. But it wouldn't matter. Adopted children have no legal claim on the estates of their biological parents. I had checked.

Keith said uneasily, "Do you have a picture of Devrie?"

"No," I lied.

"Why did she want you to find me? You still haven't said."

I shrugged. "The same reason, I suppose, that you looked for your biological family. The pull of blood."

"Then she wants me to write to her."

"Write to me instead."

He frowned. "Why? Why not to Devrie?"

What to say to that? I hadn't bargained on so much intensity from him. "Write in care of me, and I'll forward it to Devrie."

"Why not to her directly?"

"Her doctors might not think it advisable," I said coldly, and he backed off—either from the mention of doctors or from the coldness.

"Then give me your address, Seena. Please."

I did. I could see no harm in his writing me. It might even be pleasant. Coming home from the museum, another wintry day among the exhibits, to find on the mailnet a letter I could answer when and how I chose, without being taken by surprise. I liked the idea.

But no more difficult questions now. I stood. "I have to leave, Keith."

He looked alarmed. "So soon?"

"Yes."

"But why?"

"I have to return to work."

He stood, too. He was taller than Devrie. "Seena," he said, all earnestness, "just a few more questions. How did you find me?"

"Medical connections."

"Yours?"

"Our father's. I'm not a scientist." Evidently his journalism class had not studied twin-trance sensationalism.

"What do you do?"

"Museum curator. Arthropods."

"What does Devrie do?"

"She's too ill to work. I must go, Keith."

"One more. Do I look like Devrie as well as you?"

"It would be wise, Keith, if you were careful whom you spoke with about all of this. I hadn't intended to say so much."

"I'm not going to tell my parents. Not about being—not about all of it."

"I think that's best, yes."

"Do I look like Devrie as well as you?"

A little of my first, strange emotion returned with his intensity. "A little, yes. But more like me. Sex variance is a tricky thing."

Unexpectedly, he held my coat for me. As I slipped into it, he said from behind, "Thank you, Seena," and let his hands rest on my shoulders.

I did not turn around. I felt my face flame, and self-disgust flooded through me, followed by a desire to laugh. It was all so transparent. This man was an attractive stranger, was Devrie, was youth, was myself, was the work not of my father's loins but of his mind. Of course I was aroused by him. Freud outlasts cloning: a note for a research study, I told myself grimly, and inwardly I did laugh.

But that didn't help either.

In New York, winter came early. Cold winds whipped whitecaps on harbor and river, and the trees in the Park stood bare even before October had ended. The crumbling outer boroughs of the shrinking city crumbled a little more and talked of the days when New York had been important. Manhattan battened down for snow, hired the seasonal in-creses in personal guards, and talked of Albuquerque. Each night museum security hunted up and evicted the drifters trying to sleep behind exhibits, drifters as chilled and pale as the moths under permaplex, and, it seemed to me, as de-tached from the blood of their own age. All of New York seemed detached to me that October, and cold. Often I stood in front of the cases of Noctuidae, staring at them for so long that my staff began to glance at each other covertly. I would catch their glances when I jerked free of my trance. No one asked me about it.

Still no message came from Devrie. When I contacted the Institute on the mailnet, she did not call back.

No letter came from Keith Torellen.

Then one night, after I had worked late and was hurrying through the chilly gloom toward my building, he was there, bulking from the shadows so quickly that the guard I had taken for the walk from the museum sprang forward in attack position.

"No! It's all right! I know him!"

The guard retreated, without expression. Keith stared after him, and then at me, his face unreadable.

"Keith, what are you doing here? Come inside!"

He followed me into the lobby without a word. Nor did he say anything during the metal scanning and ID procedure. I took him up to my apartment, studying him in the elevator.

He wore the same jacket and cheap wool hat as in Indian Falls, his hair wanted cutting, and the tip of his nose was red from waiting in the cold. How long had he waited there? He badly needed a shave.

In the apartment he scanned the rugs, the paintings, my grandmother's ridiculously ornate, ugly silver, and turned his back on them to face me.

"Seena, I want to know where Devrie is."

"Why? Keith, what has happened?"

"Nothing has happened," he said, removing his jacket but not laying it anywhere. "Only that I've left school and spent two days hitching here. It's no good, Seena. To say that cloning is just like twinning: it's

no good. I want to see Devrie."

His voice was hard. Bulking in my living room, unshaven, that hat pulled down over his ears, he looked older and less malleable than the last time I had seen him. Alarm—not physical fear, I was not afraid of him, but a subtler and deeper fear—sounded through me.

"Why do you want to see Devrie?"

"Because she cheated me."

"Of *what*, for God's sake?"

"Can I have a drink? Or a smoke?"

I poured him a Scotch. If he drank, he might talk. I had to know what he wanted, why such a desperate air clung to him, how to keep him from Devrie. I had not seen *her* like this. She was strong-willed, but always with a blitheness, a trust that eventually her will would prevail. Desperate forcefulness of the sort in Keith's manner was not her style. But of course Devrie had always had silent money to back her will; perhaps money could buy trust as well as style.

Keith drank off his Scotch and held out his glass for another. "It was freezing out there. They wouldn't let me in the lobby to wait for you."

"Of course not."

"You didn't tell me your family was rich."

I was a little taken aback at his bluntness, but at the same time it pleased me; I don't know why.

"You didn't ask."

"That's shit, Seena."

"Keith. Why are you here?"

"I told you. I want to see Devrie."

"What is it you've decided she cheated you of? Money?"

He looked so honestly surprised that again I was startled, this time by his resemblance to Devrie. She too would not have thought of financial considerations first, if there were emotional ones possible. One moment Keith was Devrie, one moment he was not. Now he scowled with sudden anger.

"Is that what you think—that fortune hunting brought me hitching from New Hampshire? God, Seena, I didn't even know how much you had until this very—I still don't know!"

I said levelly, "Then what is it you're feeling so cheated of?"

Now he was rattled. Again that quick, half-furtive scan of my apartment, pausing a millisecond too long at the Caravaggio, subtly lit by its frame. When his gaze returned to mine it was troubled, a little defensive. Ready to justify. Of course I had put him on the defensive deliberately, but the calculation of my trick did not prepare me for the staggering naivete of his explanation. Once more it was Devrie complete, reducing the impersonal greatness of science to a personal and emotional loss.

"Ever since I knew that I was adopted, at five or six years old, I wondered about my biological family. Nothing strange in that—I think all adoptees do. I used to make up stories, kid stuff, about how they were really royalty, or lunar colonists, or survivors of the African Horror. Exotic things. I thought especially about my mother, imagining this whole scene of her holding me once before she released me for adoption, crying over me, loving me so much she could barely let me go but had to for some reason. Sentimental shit." He laughed, trying to make light of what was not, and drank off his Scotch to avoid my gaze.

"But Devrie—the fact of her—destroyed all that. I never had a mother who hated to give me up. I never had a mother at all. What I had was a cell cut from Devrie's fingertip or someplace, something discardable, and she doesn't even know what I look like. But she's damn well going to."

"Why?" I said evenly. "What could you expect to gain from her knowing what you look like?"

But he didn't answer me directly. "That first moment I saw you, Seena, in the theater at school, I thought *you* were my mother."

"I know you did."

"And you hated the idea. Why?"

I thought of the child I would never bear, the marriage, like so many other things of sweet promise, gone sour. But self-pity is a fool's game. "None of your business."

"Isn't it? Didn't you hate the idea because of the way I was made? Coldly. An experiment. Weren't you a little bit insulted at being called the mother of a discardable cell from Devrie's fingertip?"

"What the hell have you been reading? An experiment— what is any child but an experiment? A random egg, a random sperm. Don't talk like one of those anti-science reli-gious split-brains!"

He studied me levelly. Then he said, "Is Devrie religious? Is that why you're so afraid of her?"

I got to my feet, and pointed at the sideboard. "Help yourself to another drink if you wish. I want to wash my hands. I've been handling specimens all afternoon." Stupid, clumsy lie—nobody would believe such a lie.

In the bathroom I leaned against the closed door, shut my eyes, and willed myself to calm. Why should I be so dis-turbed by the angry lashing-out of a confused boy? I was handy to lash out against: my father, whom Keith was really angry at, was not. It was all so predictable, so earnestly adolescent, that even over the hurting in my chest I smiled. But the smile, which should have reduced Keith's ranting to the tantrum of a child—there, there, when you grow up you'll find out that no one really knows who he is—did not diminish Keith. His losses were real—mother, father, natural place in the natural sequence of life and birth. And suddenly, with a clutch at the pit of my stomach, I knew why I had told him all that I had about his origins. It was not from any ethic of fidelity to "the truth." I had told him he was a clone because I, too, had had real losses—research, marriage, motherhood— and Devrie could never have shared them with me. Lumi-nous, mystical Devrie, too occupied with God to be much hurt by man. *Leave me alone! Can't you ever leave me alone! All my life you've been dragging behind me—why don't you die and finally leave me alone!* And Devrie had smiled toler-antly, patted my head, and left me alone, closing the door softly so as not to disturb my grief. My words had not hurt her. I could not hurt her.

But I could hurt Keith—the other Devrie—and I had. That was why he disturbed me all out of proportion. That was the bond. My face, my pain, my fault.

*Through my fault, through my fault, through my most grievous fault.* But what nonsense. I was not a believer, and the comforts of superstitious absolution could not touch me. What shit. Like all nonbelievers, I stood alone.

It came to me then that there was something absurd in thinking all this while leaning against a bathroom door. Grimly absurd, but absurd. The toilet as confessional. I ran the cold water, splashed some on my face, and left. How long had I left Keith alone in the living room?

When I returned, he was standing by the mailnet. He had punched in the command to replay my outgoing postal mes-sages, and displayed on the monitor was Devrie's address at the Institute of the Biological Hope.

"What is it?" Keith said. "A hospital?"

I didn't answer him.

"I can find out, Seena. Knowing this much, I can find out. Tell me."

*Tell me.* "Not a hospital. It's a research laboratory. Devrie is a voluntary subject."

"Research on what? I will find out, Seena."

"Brain perception."

"Perception of what?"

"Perception of *God*," I said, torn among weariness, anger, and a sudden gritty exasperation, irritating as sand. Why not just leave him to Devrie's persuasions, and her to mystic starvation? But I knew I would not. I still, despite all of it, wanted her out of there.

Keith frowned. "What do you mean, 'perception of God'?"

I told him. I made it sound as ridiculous as possible, and as dangerous. I described the anorexia, the massive use of largely untested drugs that would have made the Institute illegal in the United States, the skepticism of most of the scientific community, the psychoses and death that had followed twin-trance research fifteen years earlier. Keith did not remember that—he had been eight years old—and I did not tell him that I had been one of the researchers. I did not tell him about the tapes of the shadowy third presence in Bohentin's holotanks. In every way I could, with every verbal subtlety at my use, I

made the Institute sound crackpot, and dangerous, and ugly. As I spoke, I watched Keith's face, and sometimes it was mine, and sometimes the expression altered it into Devrie's. I saw bewilderment at her having chosen to enter the Institute, but not what I had hoped to see. Not scorn, not disgust.

When I had finished, he said, "But why did she think that / might want to enter such a place as a twin subject?"

I had saved this for last. "Money. She'd buy you."

His hand, his third Scotch, went rigid. "Buy me."

"It's the most accurate way to put it."

"What the hell made her think—" He mastered himself, not without effort. Not all the discussion of bodily risk had affected him as much as this mention of Devrie's money. He had a poor man's touchy pride. "She thinks of me as some-thing to be *bought*."

I was carefully quiet.

"Damn her," he said. "*Damn her.*" Then, roughly, "And I was actually considering—"

I caught my breath. "Considering the Institute? After what I've just told you? How in hell could you? And you said, I remember, that your background was not religious!"

"It's not. But I... I've wondered." And in the sudden turn of his head away from me so that I wouldn't see the sudden rapt hopelessness in his eyes, in the defiant set of his shoulders, I read more than in his banal words, and more than he could know. Devrie's look, Devrie's wishfulness, feeding on air. The weariness and anger, checked before, flooded me again and I lashed out at him.

"Then go ahead and fly to Dominica to enter the Institute yourself!"

He said nothing. But from something—his expression as he stared into his glass, the shifting of his body—I suddenly knew that he could not afford the trip.

I said, "So you fancy yourself as a believer?"

"No. A believer manque." From the way he said it, I knew that he had said it before, perhaps often, and that the phrase stirred some hidden place in his imagination.

"What is wrong with you," I said, "with people like you, that the human world is not enough?"

"What is wrong with people like you, that it is?" he said, and this time he laughed and raised his eyebrows in a little mockery that shut me out from this place beyond reason, this glittering escape. I knew then that somehow or other, some-time or other, despite all I had said, Keith would go to Dominica.

I poured him another Scotch. As deftly as I could, I led the conversation into other, lighter directions. I asked about his childhood. At first stiffly, then more easily as time and Scotch loosened him, he talked about growing up in the Berkshire Hills. He became more light-hearted, and under my interest turned both shrewd and funny, with a keen sense of humor. His thick brown hair fell over his forehead. I laughed with him, and broke out a bottle of good port. He talked about amateur plays he had acted in; his enthusiasm increased as his coherence decreased. Enthusiasm, humor, thick brown hair. I smoothed the hair back from his forehead. Far into the night I pulled the drapes back from the window and we stood together and looked at the lights of the dying city ten stories below. Fog rolled in from the sea. Keith insisted we open the doors and stand on the balcony; he had never smelled fog tinged with the ocean. We smelled the night, and drank some more, and talked, and laughed.

And then I led him again to the sofa.

"Seena?" Keith said. He covered my hand, laid upon his thigh, with his own, and turned his head to look at me questioningly. I leaned forward and touched my lips to his, barely in contact, for a long moment. He drew back, and his hand tried to lift mine. I tightened my fingers.

"Seena, no..."

"Why not?" I put my mouth back on his, very lightly. He had to draw back to answer, and I could feel that he did not want to draw back. Under my lips he frowned slightly; still, despite his drunkenness—so much more than mine—he groped for the word.

"Incest..."

"No. We two have never shared a womb."

He frowned again, under my mouth. I drew back to smile at him, and shifted my hand. "It doesn't matter anymore, Keith. Not in New York. But even if it did—I am not your sister, not really. You said so yourself—remember? Not a family. Just... here."

"Not family," he repeated, and I saw in his eyes the second before he closed them the flash of pain, the greed of a young man's desire, and even the crafty evasions of the good port. Then his arms closed around me.

He was very strong, and more than a little violent. I guessed from what confusions the violence flowed but still I enjoyed it, that overwhelming rush from that beautiful male-Devrie body. I wanted him to be violent with me, as long as I knew there was no real danger. No real danger, no real brother, no real child. Keith was not my child but Devrie was my child-sister, and I had to stop her from destroying herself, no matter how... didn't I? "The pull of blood." But this was necessary, was justified... was a necessary gamble. For Devrie.

So I told myself. Then I stopped telling myself anything at all, and surrendered to the warm tides of pleasure.

But at dawn I woke and thought—with Keith sleeping heavily across me and the sky cold at the window—*what the hell am I doing?*

When I came out of the shower, Keith was sitting rigidly against the pillows. Sitting next to him on the very edge of the bed, I pulled a sheet around my nakedness and reached for his hand. He snatched it away.

"Keith. It's all right. Truly it is."

"You're my sister."

"But nothing will come of it. No child, no repetitions. It's not all that uncommon, dear heart."

"It is where I come from."

"Yes. I know. But not here."

He didn't answer, his face troubled.

"Do you want breakfast?"

"No. No thank you."

I could feel his need to get away from me; it was almost palpable. Snatching my bodysuit off the floor, I went into the kitchen, which was chilly. The servant would not arrive for another hour. I turned up the heat, pulled on my bodysuit—standing on the cold floor first on one foot and then on the other, like some extinct species of water fowl—and made coffee. Through the handle of one cup I stuck two folded large bills. He came into the kitchen, dressed even to the torn jacket.

"Coffee."

"Thanks."

His fingers closed on the handle of the cup, and his eyes widened. Pure, naked shock, uncushioned by any defenses whatsoever: the whole soul, betrayed, pinned in the eyes.

"Oh God, no, Keith—how can you even think so? It's for the trip back to Indian Falls! A gift!"

An endless pause, while we stared at each other. Then he said, very low, "I'm sorry. I should have... seen what it's for." But his cup trembled in his hand, and a few drops sloshed onto the floor. It was those few drops that undid me, flooding me with shame. Keith had a right to his shock, and to the anguish in his/my/Devrie's face. She wanted him for her mystic purposes, I for their prevention. Fanatic and saboteur, we were both better defended against each other than Keith, without money nor religion nor years, was against either of us. If I could have seen any other way than the gamble I had taken... but I could not. Nonetheless, I was ashamed.

"Keith. I'm sorry."

"Why did we? Why *did* we?"

I could have said: *we* didn't; I did. But that might have made it worse for him. He was male, and so young.

Impulsively I blurted, "Don't go to Dominica!" But of course he was beyond listening to me now. His face closed. He set down the coffee cup and looked at me from eyes much harder than they had been a minute ago. Was he thinking that because of our night together I expected to influence him directly? / was not that young. He could not foresee that I was trying to guess much farther ahead than that, for which I could not blame him. I could not blame him for anything. But I did regret how clumsily I had handled the money. That had been stupid.

Nonetheless, when he left a few moments later, the handle of the coffee cup was bare. He had taken the money.

The Madagascar exhibits were complete. They opened to much press interest, and there were both favorable reviews and celebrations. I could not bring myself to feel that it mattered. Ten times a day I went through the deadening exercise of willing an interest that had deserted me, and when I looked at the moths, ashy white wings outstretched forever, I could feel my body recoil in a way I could not name.

The image of the moths went home with me. One night in November I actually thought I heard wings beating against the window where I had stood with Keith. I yanked open the drapes and then the doors,



but of course there was nothing there. For a long time I stared at the nothingness, smelling the fog, before typing yet another message, urgent-priority per-sonal, to Devrie. The mailnet did not bring any answer.

I contacted the mailnet computer at the college at Indian Falls. My fingers trembled as they typed a request to leave an urgent-priority personal message for a student, Keith Torellen. The mailnet typed back:

TORELLEN, KEITH ROBERT. 64830016. ON MEDI-CAL LEAVE OF ABSENCE. TIME OF LEAVE: INDEF-INITE. NO FORWARDING MAILNET NUMBER. END.

The sound came again at the window. Whirling, I scanned the dark glass, but there was nothing there, no moths, no wings, just the lights of the decaying city flung randomly across the blackness and the sound, faint and very far away, of a siren wailing out somebody else's disaster.

I shivered. Putting on a sweater and turning up the heat made me no warmer. Then the mail slot chimed softly and I turned in time to see the letter fall from the pneumatic tube from the lobby, the apartment house sticker clearly visible, assuring me that it had been processed and found free of both poison and explosives. Also visible was the envelope's logo: INSTITUTE OF THE BIOLOGICAL HOPE, all the O's radiant golden suns. But Devrie never wrote paper mail. She preferred the mailnet.

The note was from Keith, not Devrie. A short note, scrawled on a torn scrap of paper in nearly indecipherable handwriting. I had seen Keith's handwriting in Indian Falls, across his student notebooks; this was a wildly out-of-control version of it, almost psychotic in the variations of spacing and letter formation that signal identity. I guessed that he had written the note under the influence of a drug, or several drugs, his mind racing much faster than he could write. There was neither punctuation nor paragraphing.

Dear Seena Im going to do it I have to know my parents are angry but I have to know I have to all the confusion is gone

Seena Keith

There was a word crossed out between "gone" and "Seena," scratched out with erratic lines of ink. I held the paper up to the light, tilting it this way and that. The crossed-out word was "mother."

*all the confusion is gone mother*

Mother.

Slowly I let out the breath I had not known I was holding. The first emotion was pity, for Keith, even though I had intended this. We had done a job on him, Devrie and I. Mother, sister, self. And when he and Devrie artificially drove upward the number and speed of the neurotransmitters in the brain, generated the twin trance, and then Keith's pre-cloning Freudian-still mind reached for Devrie to add sexual energy to all the other brain energies fueling Bohentin's holotanks—

Mother. Sister. Self.

All was fair in love and war. A voice inside my head jeered: And which is this? But I was ready for the voice. This was both. I didn't think it would be long before Devrie left the Institute to storm to New York.

It was nearly another month, in which the snow began to fall and the city to deck itself in the tired gilt fallacies of Christmas. I felt fine. Humming, I catalogued the Madagas-car moths, remounting the best specimens in exhibit cases and sealing them under permplex, where their fragile wings and delicate antennae could lie safe. The mutant strains had the thinnest wings, unnaturally tenuous and up to twenty-five cen-timeters each, all of pale ivory, as if a ghostly delicacy were the natural evolutionary response to the glowing landscape of nuclear genocide. I catalogued each carefully.

"Why?" Devrie said. "Why?"

"You look like hell."

"Why?"

"I think you already know," I said. She sagged on my white velvet sofa, alone, the PGs that I suspected acted as much as nurses as guards, dismissed from the apartment. Tears of anger and exhaustion collected in her sunken eye sockets but did not fall. Only with effort was she keeping herself in a sitting position, and the effort was costing her energy she did not have. Her skin, except for two red spots of fury high on each cheekbone, was the color of old eggs. Looking at her, I had to keep my hands twisted in my lap to keep myself from weeping.

"Are you telling me you *planned* it, Seena? Are you telling me you located Keith and slept with him because you knew that would make him impotent with me?"

"Of course not. I know sexuality isn't that simple. So do you."

'But you gambled on it. You gambled that it would be one way to ruin the experiment."

"I gambled that it would... complicate Keith's responses."

"Complicate them past the point where he knew who the hell he was with!"

"He'd be able to know if you weren't making him glow out of his mind with neurotransmitter kickers! He's not stu-pid. But he's not ready for whatever mystic hoops you've tried to make him jump through—if anybody ever *can* be said to be ready for that!—and no, I'm not surprised that he can't handle libidinal energies on top of all the other artificial energies you're racing through his brain. Something was bound to snap."

"You caused it, Seena. As cold-bloodedly as that."

A sudden shiver of memory brought the feel of Keith's hands on my breasts. No, not as cold-bloodedly as that. No. But I could not say so to Devrie.

"I trusted you," she said. "Anything for a sister"—God!"

"You were right to trust me. To trust me to get you out of that place before you're dead."

"Listen to yourself! Smug, all-knowing, self-righteous... do you know how *close* we were at the Institute? Do you have any idea what you've destroyed?"

I laughed coldly. I couldn't help it. "If contact with God can be destroyed because one confused kid can't get it up, what does that say about God?"

Devrie stared at me. A long moment passed, and in the moment the two red spots on her cheeks faded and her eyes narrowed. "Why, Seena?"

"I told you. I wanted you safe, out of there. And you are."

"No. No. There's something else, something more going on here. Going on with you."

"Don't make it more complicated than it is, Devrie. You're my sister, and my only family. Is it so odd that I would try to protect you?"

"Keith is your brother."

"Well, then, protect both of you. Whatever derails that experiment protects Keith, too."

She said softly, "Did you want him so much?"

We stared at each other across the living room, sisters, I standing by the mailnet and she supported by the sofa, need-ing its support, weak and implacable as any legendary martyr to the faith. Her weakness hurt me in some nameless place; as a child Devrie's body had been so strong. The hurt twisted in me, so that I answered her with truth. "Not so much. Not at first, not until we... no, that's not true. I

wanted him. But that was not the reason, Devrie—it was not a rationalization for lust, nor any lapse in self-control."

She went on staring at me, until I turned to the sideboard and poured myself a Scotch. My hand trembled.

Behind me Devrie said, "Not lust. And not protection either. Something else, Seena. You're afraid."

I turned, smiling tightly. "Of you?"

"No. No, I don't think so."

"What then?"

"I don't know. Do you?"

"This is your theory, not mine."

She closed her eyes. The tears, shining all this time over her anger, finally fell. Head flung back against the pale sofa, arms limp at her side, she looked the picture of desolation, and so weak that I was frightened. I brought her a glass of milk from the kitchen and held it to her mouth, and I was a little surprised when she drank it off without protest.

"Devrie. You can't go on like this. In this physical state."

"No," she agreed, in a voice so firm and prompt that I was startled further. It was the voice of decision, not surren-der. She straightened herself on the sofa. "Even Bohentin says I can't go on like this. I weigh less than he wants, and I'm right at the edge of not having the physical resources to control the twin trance. I'm having racking withdrawal symp-toms even being on this trip, and at this very minute there is a doctor sitting at Father's desk in your study, in case I need him. Also, I've had my lawyers make over most of my remaining inheritance to Keith. I don't think you knew that. What's left has all been transferred to a bank on Dominica, and if I die it goes to the Institute. You won't be able to touch it, nor touch Keith's portion either, not even if I die. And I

will die, Seena, soon, if I don't start eating and stop taking the program's drugs. I'll just burn out body and brain both. You've guessed that I'm close to that, but you haven't guessed how close. Now I'm telling you. I can't handle the stresses of the twin trance much longer."

I just went on holding her glass, arm extended, unable to move.

"You gambled that you could destroy one component in the chain of my experiment at the Institute by confusing my twin sexually. Well, you won. Now *I'm* making a gamble. I'm gambling my life that you can undo what you did with Keith, and without his knowing that I made you. You said he's not stupid and his impotency comes from being unable to handle the drug program; perhaps you're partly right. But he is me—*me*, Seena—and I know you've thought I was stupid all my life, because I wanted things you don't understand. Now Keith wants them, too—it was inevitable that he would— and you're going to undo whatever is standing in his way. I had to fight myself free all my life of your bullying, but Keith doesn't have that kind of time. Because if you don't undo what you caused, I'm going to go ahead with the twin trance anyway—the *twin trance*, Seena—without the sexual compo-nent and without letting Bohentin know just how much greater the strain is in trance than he thinks it is. He doesn't know, he doesn't have a twin, and neither do the doctors. But I know, and if I push it much farther I'm going to eventually die at it. *Soon* eventually. When I do, all your scheming to get me out of there really will have failed and you'll be alone with whatever it is you're so afraid of. But I don't think you'll let that happen.

"I think that instead you'll undo what you did to Keith, so that the experiment can have one last real chance. And in return, after that one chance, I'll agree to come home, to Boston or here to New York, for one year.

"That's my gamble."

She was looking at me from eyes empty of all tears, a Devrie I had not ever seen before. She meant it, every demented word, and she would do it. I wanted to scream at her, to scream a jumble of suicide and moral blackmail and warped perceptions and outrage, but the words that came out of my mouth came out in a whisper.

"What in God's name is worth *that*?"

Shockingly, she laughed, a laugh of more power than her wasted frame could have contained. Her face glowed, and the glow looked both exalted and insane. "You said it, Seena—in God's name. To finally know. To *know*, beyond the fogginess of faith, that we're not alone in the universe... Faith should not mean fogginess." She laughed again, this time defensively, as if she knew how she sounded to me. "You'll do it, Seena." It was not a question. She took my hand.

"You would *kill* yourself?"

"No. I would die trying to reach God. It's not the same thing."

"I never bullied you, Devrie."

She dropped my hand. "All my life, Seena. And on into now. But all of your bullying and your scorn would look rather stupid, wouldn't it, if there really can be proved to exist a rational basis for what you laughed at all those years!"

We looked at each other, sisters, across the abyss of the pale sofa, and then suddenly away. Neither of us dared speak.

My plane landed on Dominica by night. Devrie had gone two days before me, returning with her doctor and guards on the same day she had left, as I had on my previous visit. I had never seen the island at night. The tropical greenery, lush with that faintly menacing suggestion of plant life gone wild, seemed to close in on me. The velvety darkness seemed to smell of ginger, and flowers, and the sea—all too strong, too blandly sensual, like an overdone perfume ad. At the hotel it was better; my room was on the second floor, above the dark foliage, and did not face the sea. Nonetheless, I stayed inside all that evening, all that darkness, until I could go the next day to the Institute of the Biological Hope.

"Hello, Seena."

"Keith. You look—"

"Rotten," he finished, and waited. He did not smile. Although he had lost some weight, he was nowhere near as skeletal as Devrie, and it gave me a pang I did not analyze to see his still-healthy body in the small gray room where last I had seen hers. His head was shaved, and without the curling brown hair he looked sterner, prematurely middle-aged. That, too, gave me a strange emotion, although it was not why he looked rotten. The worst was his eyes. Red-veined, watery, the sockets already a little sunken, they held the sheen of a man who was not forgiving somebody for something. Me? Himself? Devrie? I had lain awake all night, schooling myself for this insane interview, and still I did not know what to say. What does one say to persuade a man to sexual potency with one's sister so that her life might be saved? I felt ridiculous, and frightened, and—I suddenly realized the name of my strange emotion—humiliated. How could I even start to slog toward what I was supposed to reach?

"How goes the Great Experiment?"

"Not as you described it," he said, and we were there already. I looked at him evenly.

"You can't understand why I presented the Institute in the worst possible light."

"I can understand that."

"Then you can't understand why I bedded you, knowing about Bohentin's experiment."

"I can also understand that."

Something was wrong. Keith answered me easily, without restraint, but with conflict gritty beneath his voice, like sand beneath blowing grass. I stepped closer, and he flinched. But his expression did not change.

"Keith. What is this about? What am I doing here? Devrie said you couldn't... that you were impotent with her, confused enough about who and what..." I trailed off. He still had not changed expression.

I said quietly, "It was a simplistic idea in the first place. Only someone as simplistic as Devrie..." Only someone as simplistic as Devrie would think you could straighten out impotency by talking about it for a few hours. I turned to go, and I had gotten as far as laying my hand on the doorknob before Keith grasped my arm. Back to him, I squeezed my eyes shut. What in God would I have *done* if he had not stopped me?

"It's not what Devrie thinks!" With my back to him, not able to see his middle-aged baldness but only to hear the anguish in his voice, he again seemed young, uncertain, the boy I had bought coffee for in Indian Falls. I kept my back to him, and my voice carefully toneless.

"What is it, then, Keith? If not what Devrie thinks?"

"I don't know!"

"But you do know what it's not? It's not being confused about who is your sister and who your mother and who you're willing to have sex with in front of a room full of researchers?"

"No." His voice had gone hard again, but his hand stayed on my arm. "At first, yes. The first time. But, Seena—I *felt* it. *Almost*. I almost felt the presence, and then all the rest of the confusion—it didn't seem as important anymore. Not the confusion between you and Devrie."

I whirled to face him. "You mean God doesn't care whom you fuck if it gets you closer to fucking with Him."

He looked at me hard then—at me, not at his own self-absorption. His reddened eyes widened a little. "Why, Seena— *you* care. You told me the brother-sister thing didn't matter anymore—but *you* care."

Did I? I didn't even know anymore. I said, "But, then, I'm not deluding myself that it's all for the old Kingdom and the Glory."

"Glory," he repeated musingly, and finally let go of my arm. I couldn't tell what he was thinking.

"Keith. This isn't getting us anywhere."

"Where do you want to get?" he said in the same musing tone. "Where did any of you, starting with your father, want to get with me? Glory... glory."

Standing this close to him, seeing close up the pupils of his eyes and smelling close up the odor of his sweat, I finally realized what I should have seen all along: he was glowing. He was of course constantly on Bohentin's program of neuro-transmitter manipulation, but the same chemicals that made the experiments possible also raised the threshold of both frankness and suggestibility. I guessed it must be a little like the looseness of being drunk, and I wondered if perhaps Bohentin might have deliberately raised the dosage before letting this interview take place. But no, Bohentin wouldn't be aware of the bargain Devrie and I had struck; she would not have told him. The whole bizarre situation was hers alone, and Keith's drugged musings a fortunate side-effect I would have to capitalize on.

"Where do you think my father wanted to get with you?" I asked him gently.

"Immortality. Godhead. The man who created Adam with-out Eve."

He was becoming maudlin. "Hardly 'the man,'" I pointed out. "My father was only one of a team of researchers. And the same results were being obtained independently in California."

"Results. I am a 'result.' What do *you* think he wanted, Seena?"

"Scientific knowledge of cell development. An objective truth."

"That's all Devrie wants."

"To compare bioengineering to some mystic quest—"

"Ah, but if the mystic quest is given a laboratory answer? Then it, too, becomes a scientific truth. You really hate that idea, don't you, Seena? You hate science validating anything you define as non-science."

I said stiffly, "That's rather an oversimplification."

"Then what do you hate?"

"I hate the risk to human bodies and human minds. To Devrie. To you."

"How nice of you to include me," he said, smiling. "And what do you think Devrie wants?"

"Sensation. Romantic religious emotion. To be all roiled up inside with delicious esoterica."

He considered this. "Maybe."

"And is that what you want as well, Keith? You've asked what everyone else wants. What do you want?"

"I want to feel at home in the universe. As if I belonged in it. And I never have."

He said this simply, without self-consciousness, and the words themselves were predictable enough for his age—even banal. There was nothing in the words that could account for my eyes suddenly filling with tears. "And 'scientifically' reaching God would do that for you?"

"How do I know until I try it? Don't cry, Seena."

"I'm not!"

"All right," he agreed softly. "You're not crying." Then he added, without changing tone, "I am more like you than like Devrie."

"How so?"

"I think that Devrie has always felt that she belongs in the universe. She only wants to find the... the coziest corner of it to curl up in. Like a cat. The coziest corner to curl up in is

God's lap. Aren't you surprised that I should be more like you than like the person I was cloned from?"

"No," I said. "Harder upbringing than Devrie's. I told you that first day: cloning is only delayed twinning."

He threw back his head and laughed, a sound that chilled my spine. Whatever his conflict was, we were moving closer.

"Oh no, Seena. You're so wrong. It's more than delayed twinning, all right. You can't buy a real twin. You either have one or you don't. But you can buy yourself a clone. Bought, paid for, kept on the books along with all the rest of the glassware and holotanks and electron microscopes. You said so yourself, in your apartment, when you first told me about Devrie and the Institute. 'Money. She'd buy you.' And you were right, of course. Your father bought me, and she did, and you did. But of course you two women couldn't have bought if I hadn't been selling."

He was smiling still. Stupid—we had both been stupid, Devrie and I, we had both been looking in the wrong place, misled by our separate blinders-on training in the laboratory brain. My training had been scientific, hers humanistic, and so I looked at Freud and she looked at Oedipus, and we were equally stupid. How did the world look to a man who did not deal in laboratory brains, a man raised in a grittier

world in which limits were not what the mind was capable of but what the bank book would stand? "Your genes are too expensive for you to claim except as a beggar; your sisters are too expensive for you to claim except as a beggar; God is too expensive for you to claim except as a beggar." To a less romantic man it would not have mattered, but a less romantic man would not have come to the Institute. What dark humiliations and resentments did Keith feel when he looked at Devrie, the self who was buyer and not bought?

Change the light you shine onto a mind, and you see different neural patterns, different corridors, different forests of trees grown in soil you could not have imagined. Run that soil through your fingers and you discover different pebbles, different sand, different leaf mold from the decay of old growths. Devrie and I had been hacking through the wrong forest.

Not Oedipus, but Marx.

Quick lines of attack came to me. Say: Keith it's a job like any other with high-hazard pay why can't you look at it like that a very dangerous and well-paid job for which you've been hired by just one more eccentric member of the monied class. Say: You're entitled to the wealth you're our biological brother damn it consider it rationally as a kinship entitlement. Say: Don't be so nicey-nice it's a tough world out there and if Devrie's giving it away take it don't be an impractical chump.

I said none of that. Instead I heard myself saying, coolly and with a calm cruelty, "You're quite right. You were bought by Devrie, and she is now using her own purchase for her own ends. You're a piece of equipment bought and paid for. Unfortunately, there's no money in the account. It has all been a grand sham."

Keith jerked me to face him with such violence that my neck cracked. "What are you saying?"

The words came as smoothly, as plausibly, as if I had rehearsed them. I didn't even consciously plan them: how can you plan a lie you do not know you will need? I slashed through this forest blind, but the ground held under my feet.

"Devrie told me that she has signed over most of her inheritance to you. What she didn't know, because I haven't yet told her, is that she doesn't have control of her inheritance any longer. It's not hers. I control it. I had her declared mentally incompetent on the grounds of violent suicidal tendencies and had myself made her legal guardian. She no longer has the legal right to control her fortune. A doctor observed her when she came to visit me in New York. So the transfer of her fortune to you is invalid."

"The lawyers who gave me the papers to sign—"

"Will learn about the New York action this week," I said smoothly. How much inheritance law did Keith know? Probably very little. Neither did I, and I invented furiously; it only needed to *sound* plausible. "The New York courts only handed down their decision recently, and Dominican judicial machinery, like everything else in the tropics, moves slowly. But the ruling will hold, Keith. Devrie does not control her own money, and you're a pauper again. But / have something for you. Here. An airline ticket back to Indian Falls. You're a free man. Poor, but free. The ticket is in your name, and there's a check inside it—that's from me. You've earned it, for at least trying to aid poor Devrie. But now you're going to have to leave her to me. I'm now her legal guardian."

I held the ticket out to him. It was wrapped in its airline folder; my own name as passenger was hidden. Keith stared at it, and then at me.

I said softly, "I'm sorry you were cheated. Devrie didn't mean to. But she has no money, now, to offer you. You can go. Devrie's my burden now."

His voice sounded strangled. "To remove from the Institute?"

"I never made any secret of wanting her out. Although the legal papers for that will take a little time to filter through the Dominican courts. She wouldn't go except by force, so force is what I'll get. Here."

I thrust the ticket folder at him. He made no move to take it, and I saw from the hardening of his face—my face, Devrie's face—the moment when Devrie shifted forests in his mind. Now she was without money, without legal control of her life, about to be torn from the passion she loved most. The helpless underdog. The orphaned woman, poor and cast out, in need of protection from the powerful who had seized her fortune.

Not Marx, but Cervantes.

"You would do that? To your own sister?"

Anything for a sister. I said bitterly, "Of course I would."

"She's not mentally incompetent!"

"Isn't she?"

"No!"

I shrugged. "The courts say she is."

Keith studied me, resolve hardening around him. I thought of certain shining crystals, that will harden around any stray piece of grit. Now that I was succeeding in convincing him, my lies hurt—or perhaps what hurt was how easily he be-lieved them.

"Are you sure, Seena," he said, "that *you* aren't just trying a grab for Devrie's fortune?"

I shrugged again, and tried to make my voice toneless. "I want her out of here. I don't want her to die."

"Die? What makes you think she would die?"

"She looks—"

"She's nowhere near dying," Keith said angrily—his an-ger a release, so much that it hardly mattered at what. "Don't you think I can tell in twin trance what her exact physical state is? And don't you know how much control the trance gives each twin over the bodily processes of the other? Don't you even know that? Devrie isn't anywhere near dying. And I'd pull her out of trance if she were." He paused, looking hard at me. "Keep your ticket, Seena."

I repeated mechanically, "You can leave now. There's no money." *Devrie had lied to me.*

"That wouldn't leave her with any protection at all, would it?" he said levelly. When he grasped the doorknob to leave, the tendons in his wrist stood out clearly, strong and taut. I did not try to stop his going.

Devrie had lied to me. With her lie, she had blackmailed me into yet another lie to Keith. The twin trance granted control, in some unspecified way, to each twin's body; the trance I had pioneered might have resulted in eight deaths unknowingly inflicted on each other out of who knows what dark forests in eight fumbling minds. Lies, blackmail, death, more lies.

Out of these lies they were going to make scientific truth. Through these forests they were going to search for God.

"Final clearance check of holotanks," an assistant said formally. "Faraday cage?"

"Optimum."

"External radiation?"

"Cleared," said the man seated at the console of the first tank.

"Cleared," said the woman seated at the console of the second.

"Microradiation?"



"Cleared."

"Cleared."

"Personnel radiation, Class A?"

"Cleared."

"Cleared."

On it went, the whole tedious and crucial procedure, until both tanks had been cleared and focused, the fluid adjusted, tested, adjusted again, tested again. Bohentin listened patiently, without expression, but I, standing to the side of him and behind the tanks, saw the nerve at the base of his neck and just below the hairline pulse in some irregular rhythm of its own. Each time the nerve pulsed, the skin rose slightly from under his collar. I kept my eyes on that syncopated crawling of flesh, and felt tension prickle over my own skin like heat.

Three-quarters of the lab, the portion where the holotanks and other machinery stood, was softly dark, lit mostly from the glow of console dials and the indirect track lighting focused on the tanks. Standing in the gloom were Bohentin, five other scientists, two medical doctors—and me. Bohentin had fought my being allowed there, but in the end he had had to give in. I had known too many threatening words not in generalities but in specifics: reporters' names, drug names, cloning details, twin trance tragedy, anorexia symptoms, bio-engineering amendment. He was not a man who much noticed either public opinion or relatives' threats, but no one else outside his Institute knew so many specific words—some people knew some of the words, but only I had them all. In the end he had focused on me his cold, brilliant eyes, and given permission for me to witness the experiment that involved my sister.

I was going to hold Devrie to her bargain. I was not going to believe anything she told me without witnessing it for myself.

Half the morning passed in technical preparation. Somewhere Devrie and Keith, the human components of this costly detection circuit, were separately being brought to the apex of brain activity. Drugs, biofeedback, tactile and auditory and kinaesthetic stimulation—all carefully calculated for the maximum increase of both the number of neurotransmitters firing signals through the synapses of the brain and of the speed at which the signals raced. The more rapid the transmission through certain pathways, the more intense both perception and feeling. Some neurotransmitters, under this pressure, would alter molecular structure into natural hallucinogens; that reaction had to be controlled. Meanwhile other drugs, other bio-feedback techniques, would depress the body's natural enzymes designed to either reabsorb excess transmitters or to reduce the rate at which they fired. The number and speed of neurotransmitters in Keith's and Devrie's brains would mount, and mount, and mount, all natural chemical barriers removed. The two of them would enter the lab with their whole brains—rational cortex, emotional limbic, right and left brain functions—simultaneously aroused to an unimaginable degree. *Simultaneously*. They would be feeling as great a "rush" as a falling skydiver, as great a glow as a cocaine user, as great a mental clarity and receptivity as a da Vinci whose brush is guided by all the integrated visions of his unconscious mind. They would be white-hot.

Then they would hit each other with the twin trance.

The quarter of the lab which Keith and Devrie would use was softly and indirectly lit, though brighter than the rest. It consisted of a raised, luxuriantly padded platform, walls and textured pillows in a pink whose component wavelengths had been carefully calculated, temperature in a complex gradient producing precise convection flows over the skin. The man and woman in that womb-colored, flesh-stimulating environment would be able to see us observers standing in the gloom behind the holotanks only as vague shapes. When the two doors opened and Devrie and Keith moved onto the platform, I knew that they would not even try to distinguish who stood in the lab. Looking at their faces, that looked only at each other, I felt my heart clutch.

They were naked except for the soft helmets that both attached hundreds of needles to nerve clumps just below the skin and also held the earphones through which Bohentin controlled the music that swelled the cathedrals of their skulls. "Cathedrals"—from their faces, transfigured to the ravished ecstasy found in paintings of medieval saints, that was the right word. But here the ecstasy was controlled, understood, and I saw with a sudden rush of pain at old memories that I could recognize the exact moment when Keith and Devrie locked onto each other with the twin trance. I recognized it, with my own more bitter hyperclarity, in their eyes, as I recognized the cast of concentration that came over their features, and the intensity of their absorption. The twin trance. They clutched each other's hands, faces inches apart, and suddenly I had to look away.

Each holotank held two whorls of shifting colors, the out-lines clearer and the textures more sharply delineated than any previous holographs in the history of science. Keith's and Devrie's perceptions of each other's presence. The whorls went on clarifying themselves, separating into distinct and mappable layers, as on the platform Keith and Devrie re-mained frozen, all their energies focused on the telepathic trance. Seconds passed, and then minutes. And still, despite the clarity of the holographs in the tank, a clarity that fifteen years earlier I would have given my right hand for, I sensed that Keith and Devrie were holding back, were deliberately confining their unimaginable perceptiveness to each other's radiant energy, in the same way that water is confined behind a dam to build power.

But how could / be sensing that? From a subliminal "read-ing" of the mapped perceptions in the holotanks? Or from something else?

More minutes passed. Keith and Devrie stayed frozen, facing each other, and over her skeletal body and his stronger one a flush began to spread, rosy and slow, like heat tide rising.

"Jesus H. Christ," said one of the medical doctors, so low that only I, standing directly behind her, could have heard. It was not a curse, nor a prayer, but some third possibility, unnameable.

Keith put one hand on Devrie's thigh. She shuddered. He drew her down to the cushions on the platform and they began to caress each other, not frenzied, not in the exploring way of lovers but with a deliberation I have never experienced outside a research lab, a slow care that implied that worlds of interpretation hung on each movement. Yet the effect was not of coldness nor detachment but of intense involvement, of tremendous energy joyously used, of creating each other's bodies right then, there under each other's hands. They were *working*, and oblivious to all but their work. But if it was a kind of creative work, it was also a kind of primal innocent eroticism, and, watching, I felt my own heat begin to rise. "Innocent"—but if innocence is unknowingness, there was nothing innocent about it at all. Keith and Devrie knew and controlled each heartbeat, and I felt the exact moment when they let their sexual energies, added to all the other neural energies, burst the dam and flood outward in wave after wave, expanding the scope of each brain's perceptions, inundating the artificially-walled world.

A third whorl formed in each holotank.

It formed suddenly: one second nothing, the next bright-ness. But then it wavered, faded a bit. After a few moments it brightened slightly, a diffused golden haze, before again fading. On the platform Keith gasped, and I guessed he was having to shift his attention between perceiving the third source of radiation and keeping up the erotic version of the twin trance. His biofeedback techniques were less experienced than Devrie's, and the male erection more fragile. But then he caught the rhythm, and the holograph brightened.

It seemed to me that the room brightened as well, although no additional lights came on and the consoles glowed no brighter. Sweat poured off the researchers. Bohentin leaned forward, his neck muscle tautening toward the platform as if it were his will and not Keith/Devrie's that strained to perceive that third presence recorded in the tank. I thought, stupidly, of mythical intermediaries: Merlyn never made king, Moses never reaching the Promised Land. Intermediaries— and then it became impossible to think of anything at all.

Devrie shuddered and cried out. Keith's orgasm came a moment later, and with it a final roil of neural activity so strong the two primary whorls in each holotank swelled to fill the tank and inundate the third. At the moment of break-through Keith screamed, and in memory it seems as if the scream was what tore through the last curtain—that is non-sense. How loud would microbes have to scream to attract the attention of giants? How loud does a knock on the door have to be to pull a sleeper from the alien world of dreams?

The doctor beside me fell to her knees. The third presence—or some part of it—swirled all around us, racing along our own unprepared synapses and neurons, and what swirled and raced was astonishment. A golden, majestic astonishment. We had finally attracted Its attention, finally knocked with enough neural force to be just barely heard—and It was astonished that we could, or did, exist. The slow rise of that powerful astonishment within the shielded lab was like the slow swinging around of the head of a great beast to regard some butterfly it has barely glimpsed from the corner of one eye. But this was no beast. As Its attention swung toward us, pain exploded in my skull—the pain of sound too loud, lights too bright, charge too high. My brain was burning on over-load. There came one more flash of insight—wordless, pat-tern without end—and the sound of screaming. Then, abruptly, the energy vanished.

Bohentin, on all fours, crawled toward the holotanks. The doctor lay slumped on the floor; the other doctor had already reached the platform and its two crumpled figures. Someone was crying, someone else shouting. I rose, fell, dragged myself to the side of the platform and then could not climb it. I could not climb the platform. Hanging with two hands on the edge, hearing the voice crying as my own, I watched the doctor bend shakily to Keith, roll him off Devrie to bend over her, turn back to Keith.

Bohentin cried, "The tapes are intact!"

"Oh God oh God oh God oh God oh God," someone moaned, until abruptly she stopped. I grasped the flesh-colored padding on top of the platform and pulled myself up onto it.

Devrie lay unconscious, pulse erratic, face cast in perfect bliss. The doctor breathed into Keith's mouth—what strength could the doctor himself have left?—and pushed on the naked chest. Breathe, push, breathe, push. The whole length of Keith's body shuddered; the doctor rocked back on his heels; Keith breathed.

"It's all on tape!" Bohentin cried. "It's all *on tape*!"

"God damn you to hell," I whispered to Devrie's blissful face. "It didn't even know we were there!"

Her eyes opened. I had to lean close to hear her answer.

"But now... we know He... is there."

She was too weak to smile. I looked away from her, away from that face, out into the tumultuous emptiness of the lab, anywhere.

They will try again.

Devrie has been asleep, fed by glucose solution through an IV, for fourteen hours. I sit near her bed, frowned at by the nurse, who can see my expression as I stare at my sister. Somewhere in another bed Keith is sleeping yet again. His rest is more fitful than Devrie's; she sinks into sleep as into warm water, but he cannot. Like me, he is afraid of drowning.

An hour ago he came into Devrie's room and grasped my hand. "How could It—He—It not have been aware that we existed? Not even have *known*!"

I didn't answer him.

"You felt it too, Seena, didn't you? The others say they could, so you must have too. It... created us in some way. No, that's wrong. How could It create us and not *know*!"

I said wearily, "Do *we* always know what we've created?" and Keith glanced at me sharply. But I had not been referring to my father's work in cloning.

"Keith. What's a *Thysania Africana*?"

"A what?"

"Think of us," I said, "as just one more biological side-effect. One type of being acts, and another type of being comes into existence. Man stages something like the African Horror, and in doing so he creates whole new species of moths and doesn't even discover they exist until long after-ward. If man can do it, why not God? And why should He be any more aware of it than we are?"

Keith didn't like that. He scowled at me, and then looked at Devrie's sleeping face: Devrie's sleeping bliss.

"Because she is a fool," I said savagely, "and so are you. You won't leave it alone, will you? Having been noticed by It once, you'll try to be noticed by It again. Even though she promised me otherwise, and even if it kills you both."

Keith looked at me a long time, seeing clearly—finally—the nature of the abyss between us, and its dimensions. But I already knew neither of us could cross. When at last he spoke, his voice held so much compassion that I hated him. "Seena. Seena, love. There's no more doubt now, don't you see? Now rational belief is no harder than rational doubt. Why are you so afraid to even believe?"

I left the room. In the corridor I leaned against the wall, palms spread flat against the tile, and closed my eyes. It seemed to me that I could hear wings, pale and fragile, beating against glass.

They will try again. For the sake of sure knowledge that the universe is not empty, Keith and Devrie and all the others like their type of being will go on pushing their human brains beyond what the human brain has evolved to do, go on fluttering their wings against that biological window. For the sake of sure knowledge: belief founded on experiment and not on faith. And the Other: being/alien/God? It, too, may choose to initiate contact, if It can and now that It knows we are here. Perhaps It will seek to know *us*, and even beyond the laboratory Devrie and Keith may find any moment of height-ened arousal subtly invaded by a shadowy Third. Will they sense It, hovering just beyond consciousness, if they argue fiercely or race a sailboat in rough water or make love? How much arousal will it take, now, for them to sense those huge wings beating on the *other* side of the window?

And windows can be broken.

Tomorrow I will fly back to New York. To my museum, to my exhibits, to my moths under permplex, to my empty apartment, where I will keep the heavy drapes drawn tightly across the glass.

For—oh God—all the rest of my life.

#### *1984, THE SF YEAR IN REVIEW*

Charles N. Brown

Well, we got through 1984. and although Big Brother didn't quite take over, he tried. The year began with Orwell's thirty-five-year-old novel near the top of the bestseller lists. There were conferences on Orwell, on *1984* the book, a new facsimile edition, a new movie, and lots of people congratulating themselves that Orwell was wrong. Was he, or was he just a bit too early? Did the book itself help prevent the more outward signs of control? The pity is that *1984*, a politically if not literarily influential work, will quickly be forgotten when we need a new version for the 1990s.

1984 ended just like 1983 and 1982: with science fiction dominating the bestseller lists and the movie screens. *Dune*, the novel, first published twenty years ago, was number one on *The New York Times* bestseller list, with *2010* by Clarke, *The Robots of Dawn* by Asimov, and the newest Piers Anthony "Xanth" novel not far behind. Also like last year, Stephen King was number one on the hardcover list and had been number one in paperback until supplanted by *Dune*. How about that?

The most popular movies, in terms of financial success, were again sf or fantasy. *Ghostbusters* was the surprise top attraction of the year with a gross of \$221 million, followed by *Indiana Jones and the Temple of Doom* (\$176 million) and *Gremlins* (\$148 million), both of which were attacked by critics for their excessive violence. *Star Trek 111* did very well at \$75 million. Two lower-budget sf movies, *Terminator* and *Starman*, were surprisingly well received.

The two Christmas biggies were *Dune* and *2010*. Neither got good reviews, and *Dune* sank fairly quickly after being described by one reviewer as "full of sand and fury, signify-ing nothing." *2010* was called boring, but survived and has had good audience response. Both movies did well by the book field. Not only *Dune* and *2010* made it back onto the bestseller lists; *Dune Messiah* and *2007* also came along. A 1.4 million-copy movie edition of *Dune* secured its position as the most read sf novel of all time.

It was a year of expansion in sf. There were more books, more new publishers, and higher advances.

The number of sf/fantasy books published in 1984 was 1176—up 8% from the 1983 figure of 1085 but still below the 1979 record figure of 1288. 613 or 52% of the books were new, with sf novels (198) still outnumbering fantasy novels (172), but not by much. There were more reference books (63) and collections (54) and about the same number of anthologies (57) as last year.

The Berkley Publishing Group, which produces Ace Books, Charter Books, Tempo Books, and Jove Books, as well as Berkley Books, is the largest publisher of sf in the world. They did 255 titles in 1984—nearly a quarter of all the titles published. Del Rey and a redesigned DAW Books were the runners-up, with an expanding Bantam line moving up to fourth place. Bantam has announced a new sf imprint—Bantam Spectra—and will be expanding again in 1985. Warner Books has announced a new sf line, Questar, via its Popular Library imprint for 1985. Pocket Books sank its critically acclaimed Timescape line and took over distribution of Baen Books, the newest sf publisher. Bluejay Books, which specializes in trade paperbacks, had a good first year. Tor Books expanded its paperback line and added a hardcover line. The editorial merry-go-round continued: former Timescape editor David G. Hartwell joined Tor as a consultant. He also became the science fiction consultant for Arbor House when Robert Silverberg moved to Donald I. Fine Publishing. Ginjer Buchanan joined Ace, replacing Beth Meacham who moved to Tor.

The biggest selling hardcover book of 1984 was *The Talisman* by Stephen King and Peter Straub. In order to release the copies all at once, Viking had a half million in General Electric warehouses around the country. There are now nearly a million copies in print. There was no book club sale, and the book became the most discounted volume of 1984.

Waldenbooks pushed science fiction vigorously with its "Otherworlds Club," which now has over 150,000 members.

The chain was sold to K-Mart, which will start a discount bookstore chain in 1985.

Arthur C. Clarke took a ten-cent advance for his next book, *The Songs of Distant Earth*, and a dollar for *20,001: the Final Odyssey*, from Del Rey Books. "Arthur really only wanted a penny," his agent, Scott Meredith, said, "but couldn't figure out how to pay his agent ten percent, so he settled for ten cents." When and if the books get written, the actual advance will be \$1.6 million, but Clarke didn't want to be saddled with either a deadline or a high advance. "There is no truth to the rumor I'm planning *20 Billion and One: the Final Iliad*," said Clarke.

Robert Silverberg joined the big-advance crowd by getting somewhere between a half and one

million dollars, depending on escalators, for his next two books, *Tom O'Bedlam* and *The King of the Gypsies*. His new publishers are Donald I. Fine in hardcover and Warner Books in paperback.

Isaac Asimov turned down a \$1 million advance offered by New American Library for the novelization of *Fantastic Voy-age II*. He felt morally obligated to write sf only for Doubleday.

Frank Herbert celebrated "The Year of Dune" by shaving off his beard and wandering unrecognized around the American Booksellers Association meeting in Washington. His naked face became even more famous when he appeared in a long futuristic Superbowl commercial. Stephen King's face also achieved fame when he appeared in sartorial splendor in an American Express commercial.

Harlan Ellison still hasn't finished the most famous unpublished book in science fiction, *The Last Dangerous Visions*, but came out of a massive, decade-long writer's block and turned in several other collections and anthologies.

L. Ron Hubbard did not appear in public and did not publish his ten-volume new novel, but his sponsorship of a quarterly new writers' contest with large cash prizes helped the field. He is also connected with a newly announced sf magazine, *To the Stars*, which is scheduled to appear in 1985. The thirty-foot inflated villain from *Battlefield Earth* was the biggest convention attendee of 1984, appearing nationwide to promote the book.

Robert A. Heinlein celebrated his 77th birthday by finishing a new novel, as yet untitled, and sailing through the Northwest Passage.

1984 was the year of the first novel, with a larger than usual number of high-quality books appearing. The revived Ace Specials, edited by Terry Carr, gave us two excellent ones: *Neuromancer* by William Gibson and *The Wild Shore* by Kim Stanley Robinson, plus two good ones—*Green Eyes* by Lucius Shepard and *Them Bones* by Howard Waldrop. Other fine first novels included *Divine Endurance* by Gwyneth Jones (Allen & Unwin), *Procurator* by Kirk Mitchell (Ace), *Emergence* by David R. Palmer (Bantam), *Frontera* by Lewis Shiner (Baen), *Winter's Daughter* by Charles Whitmore (Timescape), and *The Game Beyond* by Melissa Scott (Baen).

My favorite sf novel of the year was *Across the Sea of Suns* by Gregory Benford (Timescape), followed by *Demon* by John Varley (Berkley). Other outstanding sf novels included *The Integral Trees* by Larry Niven (Del Rey) and *Heechee Rendezvous* by Frederik Pohl (Del Rey). *Star Rebel* by F.M. Busby (Bantam) is an excellent space opera.

It was a good year for books about science fiction. Editor David Hartwell gave us his personal view of sf in *Age of Wonders* (Walker) and Jack Williamson did a marvelous auto-biography, *Wonder's Child: My Life in Science Fiction* (Bluejay). *The Faces of Science Fiction* by Patti Perret (Bluejay) is a collection of photographs of sf authors in their native habitats. *Index to Science Fiction Anthologies and Collections (1977-1983)* by William Contento (G.K. Hall) is the second volume in an extremely important ongoing reference work. The newest edition of *A History of the Hugo, Nebula & International Fantasy Awards*, the most used reference work in sf, is available from Howard DeVore, 4705 Weddel St., Dearborn, MI 48125 for \$6.00 postpaid. It lists winners and nominees for all the major awards. It's impossible to play sf trivia without it.

*The Years of the City* (Timescape) by Frederik Pohl, a series of stories about a future New York, is somewhere between a short story collection and a novel. It's a fine piece of work in any case. Pohl, one of our best writers, also had another collection, *Pohlstars* (Del Rey). Other recommended science fiction collections are *One Winter in Eden* by Michael Bishop (Arkham), *The Songbirds of Pain* by Garry Kilworth (Gollancz), *Extraordinary People* by Joanna Russ (St. Martin's), *Utopia Hunters* by Somtow Sucharitkul (Bantam), and *Rhialto the Marvellous* by Jack Vance (Brandywine).

*Light Years and Dark*, edited by Michael Bishop, was the outstanding anthology of the year.

The sf magazines survived again, but things don't look too good. There were five professional fiction

magazines which produced fifty issues. Both figures are the same as last year and among the lowest figures in forty years. Newsstand circulation has eroded to the point where it's probably a money-losing proposition for all, only of use to bring in a flow of new subscriptions and as advertising. There's no way of dropping it, though. Even though two out of three magazines are thrown away, it's still one of the cheapest forms of advertising. A digest costs about 17 cents to print. Direct advertising through the mail costs \$10 or more per new subscriber. Advertising in other magazines is cheaper, but only brings in a small number of responses per ad.

Although circulation suffered, the sf magazines—especially *Asimov's* and *F&SF*—published a lot of good fiction. *Omni* and *Playboy* also did some fine stories. There were about fifteen original anthologies. Altogether, there were approximately six hundred new works of short fiction published in 1984.

Obituaries: A. Bertram Chandler, 72, died June 6, 1984, after a heart attack. Although Chandler, a sea captain, started as a John W. Campbell/*Astounding* author in 1944, he made his science fictional name as a novelist for Ace. His "Grimes" stories, which transferred his seagoing experience into space, proved popular for thirty years. William L. Crawford, 72, who started both the small press field and the semi-professional magazine field in the thirties, died January 26, 1984. Walter Tevis, 56, died of lung cancer on August 9, 1984. His most famous sf novels were *The Man Who Fell to Earth* (1963) and *Mockingbird* (1980). Other deaths included Charles G. Finney, 79, author of *The Circus of Dr. Lao*, Leonard Wibberly, 68, author of *The Mouse That Roared*, and Johnny Weismuller, 79, the embodiment of Tarzan.

Tim Powers won the Philip K. Dick Memorial Award for best paperback original of 1983 with *The Anubis Gates*. The award was presented at Norwescon in March, 1984.

The John W. Campbell Memorial Award for best novel of 1983 went to Gene Wolfe for *The Citadel of the Autarch*. The award was presented at the University of Kansas, Lawrence, KS, July 28.

The 1983 Nebula Awards were presented at a banquet aboard the *Queen Mary* in Long Beach, California, on April 28, 1984, with lots of "ship of fools" jokes. Winners were: Best Novel, *Startide Rising* by David Brin; Best Novella, "Hardfought" by Greg Bear; Best Novelette, "Blood Music" by Greg Bear; Best Short Story, "The Peacemaker" by Gardner Dozois. The Nebulas are nominated and voted on by members of the Science Fiction Writers of America.

The 1984 *Locus* Awards were announced on June 20. Winners were: Best SF Novel, *Startide Rising* by David Brin; Best Fantasy Novel, *The Mists of Avalon* by Marion Zimmer Bradley; Best First Novel, *Tea With the Black Dragon* by R.A. MacAvoy; Best Novella, "Her Habiline Husband" by Michael Bishop; Best Novelette, "The Monkey Treatment" by George R.R. Martin; Best Short Story, "Beyond the Dead Reef" by James Tiptree, Jr.; Best Anthology, *The Best SF of the Year #12* edited by Terry Carr; Best Single Author Collection, *Unicorn Variations* by Roger Zelazny; Best Related Nonfiction Book, *Dream Makers, Volume II* by Charles Platt; Best Artist, Michael Whelan; Best Magazine, *Locus*; Best Publisher, Ballantine/Del Rey. The *Locus* Awards are chosen by subscribers to *Locus* magazine.

The 1984 Hugo Awards were presented in Anaheim, California, September 2, 1984. Winners were: Best Novel, *Startide Rising* by David Brin; Best Novella, "Cascade Point" by Timothy Zahn; Best Novelette, "Blood Music" by Greg Bear; Best Short Story, "Speech Sounds" by Octavia Butler; Best Nonfiction Book, *The Encyclopedia of SF & Fantasy, Vol. III*, by Donald H. Tuck; Best Dramatic Presentation, *Return of the Jedi*; Best Professional Editor, Shawna McCarthy; Best Professional Artist, Michael Whelan; Best Semi-Prozine, *Locus*, edited by Charles N. Brown; Best Fanzine, *File 770*, edited by Mike Glycer; Best Fan Writer, Mike Glycer; Best Fan Artist, Alexis Gilliland. The John W. Campbell Award for best new writer went to R.A. MacAvoy. Nominations and voting for the Hugos and the Campbell Award are open to any member of the World Science Fiction Convention in the year of presentation.

The 1984 World Fantasy Awards were presented at the World Fantasy Convention in Toronto, Canada, on October 14. Winners were: Life Achievement, L. Sprague de Camp, Richard Matheson, E. Hoffman Price, Jack Vance, and Donald

Wandrei; Best Novel, *The Dragon Waiting* by John M. Ford; Best Novella, "Black Air" by Kim Stanley Robinson; Best Short Fiction, "Elle Est Trois (La Mort)" by Tanith Lee; Best Anthology/Collection, *High Spirits* by Robertson Davies; Best Artist, Steve Gervais; Special Award (Professional), Ian and Betty Ballantine, Joy Chant, George Sharp, and David Larkin for *The High Kings*; Special Award (Non-Professional), Stephen Jones and David Sutton, for *Fantasy Tales*; Special Convention Award, Donald M. Grant. The awards are chosen by a panel of judges.

LAcon II, the 42nd World Science Fiction Convention, held August 30 to September 3, 1984, was both the largest and the most profitable science fiction convention ever held. Because Constellation, last year's convention, budgeted too high and lost \$40,000, the LAcon committee did some very tight planning. They ended up with a record attendance of 8,200 and a profit of nearly \$200,000, which is being used for various fanish and science fictional projects. The convention itself, spread over several hotels and a huge convention center, was excellent and, despite the number of people, uncrowded. This annual sf party has been getting better with age and has something for everyone, from the rankest beginner to the oldest jaded fan.

The 43rd World Science Fiction Convention will be held in Melbourne, Australia. August 22 to 26, 1985. Guests of Honor are Gene Wolfe and Ted White. For information on membership, write Fred Patten, 11863 West Jefferson Blvd. Apt. 1, Culver City, CA 90230, USA.

The North American Science Fiction Convention (The First Occasional Lone Star SF Convention & Chili Cook-Off) will be held in Austin, TX, August 30-September 2, 1985. Guests of Honor are Jack Vance, Richard Powers, Joanne Burger, and Chad Oliver. For membership information write NASFIC, Box 9612, Austin, TX 78766.

The 44th World Science Fiction Convention, Confederation, will be held in Atlanta, GA, August 28-September 1, 1986. Guests of Honor will include Ray Bradbury, Terry Carr, and Bob Shaw. For membership information write Confederation, 2500 N. Atlanta St. #1986, Smyrna, GA 30080.

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Charles N. Brown is the editor of *Locus*, the newspaper of the science fiction field; it appears monthly and is in its eighteenth year of publication. Copies are \$2.50 each. Subscriptions in the United States are \$24.00 for twelve issues, \$45.00 for twenty-four issues, via second-class mail. First-class subscriptions in the U.S. or Canada are \$31.00 for twelve issues, \$59.00 for twenty-four issues. Overseas subscriptions are \$26.00 for twelve issues, \$49.00 for twenty-four issues, via sea mail. Airmail overseas subscriptions are \$38.00 for twelve issues, \$72.00 for twenty-four issues. All subscriptions are payable only in U.S. funds to *Locus Publications*, P.O. Box 13305, Oakland, CA 94661.

### RECOMMENDED READING

Terry Carr

BRIAN ALDISS: "The Gods in Flight." *Interzone*, Autumn 1984; and *Isaac Asimov's Science Fiction Magazine*, Mid-December 1984.

BEN BOVA: "Out of Time." *Omni*, November 1984.

DAVID BRIN: "Cyclops." *Isaac Asimov's Science Fiction Magazine*, March 1984.



DAMIEN BRODERICK: "Coming Back." *Omega Science Digest*, July-August 1984.

EDWARD BRYANT: "Pilots of the Twilight." *Isaac Asimov's Science Fiction Magazine*, Mid-December 1984.

PAT CADIGAN: "Variation on a Man." *Omni*, January 1984.

GORDON EKLUND: "Chambers of Memory." *Light Years and Dark*.

SHARON N. FARBER: "Passing as a Flower in the City of the Dead." *Universe 14*.

MOLLY GLOSS: "Interlocking Pieces." *Universe 14*. "Joining." *Fantasy and Science Fiction*, June 1984.

HARVEY JACOBS: "The Man Who Came Close." *Fantasy and Science Fiction*, December 1984.

JACK MC DEVITT: "Promises to Keep." *Isaac Asimov's Science Fiction Magazine*, December 1984.

M. SARGENT MAC KAY: "Demon Lover." *Fantasy and Science Fiction*, June 1984.

PAT MURPHY: "Art in the War Zone." *Universe 14*.

DAVID OHLE: "Bagatelle." *The Missouri Review*, Vol. VII, no. 2.

FREDERIK POHL: "The Kindly Isle." *Isaac Asimov's Science Fiction Magazine*, November 1984.

KIM STANLEY ROBINSON: "Ridge Running." *Fantasy and Science Fiction*, January 1984.

JOANNA RUSS: "Bodies." *Extra(ordinary) People*.

HILBERT SCHENCK: "Silicon Muse." *Analog*, September 1984.

LEWIS SHINER: "Till Human Voices Wake Us." *Fantasy and Science Fiction*, May 1984.

GARY W.-SHOCKLEY: "The Coming of the Goonga." *The Clarion Awards*.

HOWARD WALDROP: "Helpless, Helpless." *Light Years and Dark*.