

Journey to Madness

Other books by Stephen McGrew:

The Meditations of Marcus Aurelius

Yesterday's Tomorrows

Mars, Ho!

Nobots

The Paxil Diaries

Voyage to Earth

Grandma's Cookbook

Random Scribblings Volume One

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To Poul Anderson, who coined the word “asterite” in his story *Industrial Revolution*. That word was formerly used to denote objects from the belt when no one had ever exited Earth’s atmosphere; he called the people that.

To Red Skelton for the word “kadiddlehopper.”

To dihydrogen monoxide, without which I just couldn’t live, honestly.

To my late cousin Dave Rayfield, who started me on the road to becoming a magician. AI is a David Copperfield style magic trick. Computers can’t think.

To my late friend Ralph Wiebe, a World War Two Navy man whom I was friends with towards the end of his life. Ralph was too stubborn to see a doctor about the pain in his side until his appendix burst. He died a month later at age eighty seven.

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To Sir Clive Sinclair, who designed the primitive TS-1000 computer I wrote *Artificial Insanity* on, an AI program. It would answer any question and might deliberately piss you off. It was designed to make you believe it was a sentient asshole.

To the songwriters who wrote the songs referenced and quoted in this book:

Mick Jagger and Keith Richards, *2000 Light Years From Home*

John Fogerty, *Bad Moon Rising* and *Willie and the Poor Boys*

Bobby Scott and Bob Russell, *He Ain't Heavy, He's My Brother*

Paul McCartney, *Hi Hi Hi*

Van Morrison, *Moondance*

Led Zeppelin and Ian Stewart, *Rock and Roll*

Sammy Hagar, *Space Station #5*

Jimmy Page and Robert Plant, *Stairway to Heaven*

Bee Gees, *Stayin' Alive*

Lennon and McCartney, *Strawberry Fields Forever*

Robbie Robertson, *The Weight*

Steve Marriott, *Thirty Days in the Hole*

Willie Dixon, *Whole Lot of Love*

And whoever wrote *Turkey in the Straw*

Prologue:

A Serious Journey

History's first human venture outside our star's heliosphere was an utter catastrophe that ended in insanity. Mankind had sent probes outside our star system at the very birth of space travel, but humans hadn't ventured much past the moons of Jupiter and Saturn; robots sufficed.

It didn't seem like a catastrophe at first.

Mankind had tamed Mars and the asteroids and thought they could do anything, so when the technology reached the point that humans could visit other stars, they chose one over eight light years away.

It was a mistake they didn't realize until after the crew's return.

David Rayfield was one of the biologists on the trip. The first place he went on returning to Mars was the tavern he and his best buddy had drunk in before Dave left for Sirius.

Dave didn't yet realize how serious Sirius had been. He walked in, and there his buddy was, tending bar and looking very, very old. Ancient.

"Joe? Is that you? You're tending bar now? They're letting you? I thought you'd be retired. How you doin', you old rascal?"

Joe frowned. "Sorry, son, I must be getting old, do I know you? And it's my bar now, can I get you a drink?"

"It's Dave, man. Give me a Knolls lager, draft."

"Sorry, Dave, we're sold out of Knolls. We have some Guinness, that's almost as good. But I'm sorry, I still don't know who you are. Memory ain't as good as it used to be."

"Dave Rayfield, Joe. Of course it's been a lot longer for you than me. Yeah, Guinness will do."

"Dave Rayfield? I haven't seen him since I was twenty. You his grandson?" he asked, pouring the beer.

“No, Joe, I’m Dave. Same Dave you knew back then.”

“But you’re so *young!*”

“It was the trip. I was in the science expedition to Grommler while I hear you were throwing rocks and ice at Mars from the asteroid belt and Saturn’s rings.”

“The terraforming is still going on here. I’m a little old for space hopping now. Hell, if I spent any more time traveling through space I’d live forever. But how the hell did you stay a damned kid?”

“Same way you’re not dead at a hundred fifty five. Time dilation. Most people die around age ninety five, but speed changes time. You’d be dead by now if you hadn’t been a spaceship captain. It’s been a hundred years since you’ve seen me, but it’s only been twenty years since I’ve seen you.”

“So where have you been for the last hundred years?”

“Twenty years to me. We went to Grommler.”

“Where’s that?”

Dave laughed. “It orbits Sirius, but it was the least serious place I’ve ever seen! Really weird place.”

“Weird how?”

“Every way weird goes. First off, being outside without an environment suit is really creepy. Second, there was no fauna at all, not even insects. Only flora, despite having more oxygen than Earth. The geologists said it was because of the carbon dioxide from volcanoes that there could even be any flora.

“But the weirdest was the plants. We were there for two years, and that’s in static time, and every single plant we tested had cannabinoids and other psychoactive components. There were a lot of brush fires because of the wind and lightning, so every time you went outside you got stoned. Hell, some of the guys practically lived outside!”

“Need another beer?”

Dave eyed his glass and downed it. “Yeah. Jesus, Joe, things sure changed in the last twenty years.”

“It’s been a hundred years since you left, Dave. It only seems like twenty to you,” he said as he filled Dave’s glass.

“I guess. But you know what, Joe? I’m going to clean

up!”

“What do you mean?”

Dave pulled out an envelope. “These. Grommlerian tomato seeds. Grommlerian plants have a completely different ordering than our plants, it’s something different than DNA and we’re still trying to figure it out. But they make seeds like Earth plants.”

“Tomatoes?”

“Not really. They look like tomatoes but taste way different, but they taste really good. And they get you really stoned.”

“Well, okay, you found a reefer planet. When you find a beer planet, let me know.”

But it didn’t work out like Dave or anyone else had planned.

Sirius was an impressive combination of hubris and lack of imagination. An impressively pitiful lack of imagination.

Mars and most of the larger asteroids, at least those fit for mining, had been colonized centuries earlier, sporting domed cities for their mining operations. 16 Psyche, the “golden asteroid” was long gone, moved in chunks to Mars, mostly for its iron. Much of its gold and platinum were exported to Earth, where those metals were still valuable.

It had taken centuries, and was part of the reason for their attitude. They thought themselves invincible, with their nuclear fission powered ion ships. The ships were huge, larger than some Earthian skyscrapers. The electrical generators that powered the gigantic ion thrusters were three stories tall alone. The thrusters could get up to a third of Earth gravity for hours before the generators needed to cool.

There were dozens of interplanetary shippers and passenger transport companies. GOTS, the Green-Osbourne Transportation System, was the largest and best equipped outfit in space. They were also the best armed, and had even started a security force that often accompanied other shippers’ ships, at a price, over two centuries earlier. The pirates were still more than a nuisance; there is no more law in outer space than there was on the high seas in the eighteenth century,

except for the laws on asteroids and planets. Pirates were dealt with by their victims' governments.

GOTS had started equipping their space ships with fusion generators that more than quintupled the power. Although all of the power didn't make it to the engines for various technical reasons, they would do better than an Earth gravity of thrust, and what's more, could do it continuously. With the fission generators, after two hours one of the two generators would be shut down for an hour, then restarted and the other generator given a rest, and there was less than half of its thrust when one generator was shut down.

Einstein's theory states that the faster an object travels, the slower the entropy, which is what time measures. It was proven at the beginning of space travel before robots had crawled across Mars, when NASA sent an atomic clock into Earth's orbit. It had read exactly the same time as an identical atomic clock on Earth, and time did slow down on the orbiting clock; the two didn't match on its return. It would have been a very big deal had Einstein been proven wrong.

Years after GOTS started using fusions, someone got the idea to visit neighboring stars, since at over a full Earth gravity of thrust, a ship could get you to nearby stars in a decade or less, "nearby" being a very relative term, as it takes years for light to reach us from the very nearest stars, they're so far away.

A decade or less on the ship, that is. It probably wasn't the wisest choice to pick a star that was two and a half parsecs away, but they decided to go to Sirius, as telescoping had shown the possibility of its having an inhabited planet, despite being a binary with a white dwarf.

They went to Sirius and came back with little trouble, considering the biggest trouble in any voyage was pirates. Pirates were mostly around Mars and in the asteroid belt, but there were surely dangers in the Oort cloud that luck alone possibly avoided for them, although in space there is an awful lot of space, even in the belt or the Oort.

They brought back some of its second planet Grommler's seeds. They had taken all sorts of scientists, but

the biologists were the ones to hit the jackpot. They found life, and an awful lot of it, all flora. There weren't even insects, and its life wasn't based on deoxyribonucleic acid like life on Earth, but a similar but surprisingly different ordering. They're still being studied.

But the science that paid off second best from the trip was psychology, despite the fact that it was not supposed to be a required field of study and no psychologists had gone. Not until a year after the trip had ended did psychology become a required field, when the crew and scientists started going insane.

At first, the cause of their various mental illnesses was thought to be the plants and seeds that had been brought back, as all had psychoactive compounds, and the crew had all been exposed to its smoke while on the planet. Laws were passed making possession of grommlerian seeds a felony.

Psychologists with degrees in psychology set the amateur psychologists straight. They showed that although the fact that there was no animal life on the planet, which some blamed on Sirius being a binary white dwarf, insanity hadn't caused all the animals to die, they had never evolved to begin with.

And "insane" wasn't quite accurate, either. The world went insane, in the eyes of the people in the expedition. They had left Mars twenty years earlier, but about a century had passed on Mars when they were gone, while only a couple of decades passed for the people on the trip. They were the first travelers through time, but time travel from relativistic speeds only goes one way, forwards, like time always goes. Time is simply the measurement of entropy. Simply stated, the faster you go, the less entropy there is, for you.

To understand the perceived insanity of the world around them, imagine a person born in 1880 and then in 1900 when she was twenty, instantly transported forward a century. She had seen little or no change in her twenty year long life from 1880 to 1900. When she left in 1900, women had not yet gained the vote, and ladies never ventured into saloons; they were men-only. Women who drank did so secretly. Women

never wore trousers, only skirts or dresses, with the hem lower than the ankle, and her blouse buttoned up to her neck. Slavery was still a living memory and the races were strictly segregated. Anyone not White was hated and completely subjugated, especially natives and Asians.

Only the biggest cities had plumbing. Most people had outhouses, and those with plumbing had the toilet in the basement by the coal room, because feces are even nastier than coal. Coal doesn't even stink unless you set it on fire.

Automobiles had existed all her life, but she had never seen one, only heard of them. They were only toys for very rich men with no practical uses at all; a buggy or wagon was far cheaper, dependable, and comfortable, as well as much faster and could travel over almost any terrain for a lot longer; a horse refuels itself. Autos needed flat surfaces, couldn't go much faster than walking speed, and most did so very noisily.

The sky had no contrails, ever. Not only were there no military jets or commercial jet airliners to leave contrails, the airplane itself wouldn't be invented for three years.

There were no televisions or radios or power tools; electricity was brand new, rare, and not very useful. A computer was a person whose job was to do complex mathematics. In a handful of cities, like Chicago and New York, electricity was generated, and Edison's new "light bulb" lit, but oil lamps were mostly used for lighting. Telegraphs and light bulbs were about the only uses for electricity, although she had read that electric engines were starting to be used in industry.

Then all of a sudden after a "twenty year" absence that is actually a century later, everything runs on electricity. The sky is crisscrossed with contrails, and would be for another decade until airliners had wingtips curled upwards, saving fuel and eliminating contrails, except from military and private jets that still had straight wingtips.

There were magic mirrors and crystal balls that show moving pictures with sound, and devices you could stick in a pocket that let you talk to someone in another state, or even on the other side of the world. There were no horses, stables,

blacksmiths, whips, farriers, oil lamps, butter churns, coal furnaces, or anything at all the least bit familiar, only magical things and indoor outhouses and asphalt and this stuff they called “plastic” and concrete and unbelievably giant buildings. Women wore pants, and when they wore skirts, their skirts were above her knees, often way above. Worse, they even showed cleavage! Women not only visited taverns openly, and not only voted, but were senators, as were those whose ancestors had been enslaved in her parents’ time.

It would be hard to understand people’s accents, as well as all of the new words that would enter the lexicon: Airplane, propeller, elevator, astronaut, laser, television, air bag, carburetor, satellite, refrigerator, robot, Freon, login, backup... as well as words whose meanings and spellings and pronunciations had changed in a century.

And everyone you ever knew was dead or over a hundred years old, and the ones still living had been children when you last saw them.

Is it any wonder the people in the expedition mostly developed various and serious mental illnesses? Quite a few committed suicide. Two were institutionalized. None ever led any kind of happy lives. No one ever thinks about how much society and technology can change in a single short century.

Nobody thought again about visiting alien stars. Not for another century.

Legend had it that humans had sent solar sails to Alpha Centauri, the closest star system to the sun, not long after the birth of space travel. The solar sails were lost, of course; a parsec is a long way. It takes four years for light to get to Centauri and it took the solar sails decades.

The first solar sails to actually make it there didn’t send back much data. Back then, you couldn’t generate much electricity with an object that small and light, and its cameras were limited to certain frequencies of light, as well. And radios were still pretty primitive, compared to modern radios. Plus, it wasn’t like they could actually land, or even maneuver.

But again, this was only legend. Much of history was lost when the supervolcano under the Yellowstone caldera

exploded.

A century after the first humans walked on the moon, legend said that they sent a probe to our nearest star, but its data were lost to history when Earth became a dictatorship long after Yellowstone had exploded, and it is argued that it didn't even happen. Much history had been lost then.

The nearest star to ours is Proxima Centauri, a very small star, and it has a planet in the habitable zone, Anglada-Escudé, named after the leader of the team who discovered it hundreds of years earlier. It's a little larger than Earth and somewhat more massive, and has water, which is surprising so close to the star. That's about all they know about it that they didn't know hundreds of years ago; telescopes have an awful time trying to image something as tiny as the Earth from a parsec away.

The Earthians did send an automated ship full of instrumentation about fifty years earlier than the manned expedition to Proxima Centauri. It had been missing for twenty years, despite the fact that they actually recorded all its data as it traveled. Of course its radio's transmission frequency stretched as it accelerated, transmission seemingly slowing down and the radio frequency dropping as the craft sped up. But then it just stopped transmitting, suddenly, in interstellar space where you theoretically shouldn't even see much dust or even gas. Nothing in its data explained its loss. There was its normal telemetry and the signals simply stopped suddenly. It could have crashed, its radio could have malfunctioned, anything, there was no way to know.

The thing is, in the earliest days of space travel hundreds of years ago, they had huge amounts of trouble automating something as simple as landing a probe on Mars. That's where we are now with trying to reach Anglada. Maybe not even that far.

So they decided they needed to send real brains. Electronic computers have always been complicated adding machines, even though you wouldn't know it, and they just won't cut it. A computer can only respond to what it's been programmed to; "artificial intelligence" is just a programming

trick that uses giant databases and pseudo-random numbers. We still can't make a computer that actually thinks, but sentience is easy to fake.

The only way to send real brains was to send those brains inside of the people who owned them. That's a problem of course. Time travel causes insanity, which isn't any good for brains at all.

Pre-Launch

The idea of “races” had been gone long ago in antiquity. When commercial air travel had been developed halfway through the twentieth century was the beginning of the end; before that, and many decades afterwards, the idea of race was merely exploited. After air travel, people intermingled to the point that everyone had DNA from every “race.” The idea of race itself had always been a huge ignorance.

But something similar existed, in the looks of Earthians and spacers, although they weren’t “races.” The spacers, those living on Mars and the larger asteroids, were all very well fed. There were farming and ranching domes on Mars and the larger asteroids, and had been exporting food to Earth for centuries. Somewhere with gravity as low as an asteroid had people wanting to weigh more. You needed weighted “gravity belts” on most asteroids. Well fed children grow taller and fatter than those who are malnourished.

The Earthians weren’t so lucky. Food was scarce on Earth. In the centuries since the industrial revolution they had polluted the planet with chemicals and plastics and pretended that there was a real away to throw things. Maybe they actually believed it, as illogical and irrational as that is. They had burned coal and oil and chemicals derived from those substances and had released all sorts of toxins, as well as gasses that trapped heat in the atmosphere.

Space wasn’t heaven, but Earth was hell, or at least a pretty good impersonation of hell. An Earthian considered any spacer obese, while they themselves were skin and bones, and a lot shorter than a spacer. Poor nutrition stunts children’s growth, and everyone there was always hungry. You could see the ribs of anyone not wearing a shirt, and near the equator obesity would have been fatal, had obesity existed there. The

very richest Earthians weighed between what normal Earthians and spacers weighed. As was the case through history, the rich were taller than the poor, simply from having good nutrition all their lives.

The planet's climate had changed rapidly in the twenty first century before combustion was outlawed by international treaty, and for a very long time afterwards. There were horrible storms; cyclones and hurricanes on land (rather, storms as wicked and even more so), five mile wide EF-5 and even stronger and larger tornadoes, monstrous wildfires, floods, and landslides on various areas of the globe. Earthians had moved underground, coming up topside on sunny days when the wind wasn't blowing too briskly; eighty kilometer per hour winds were far from unusual anywhere. Nobody lived anywhere near low lying land because of flooding; flooding is deadly to anyone living underground.

Travel was almost all underground, except on the nicest of days, if anywhere was bicycling distance. The age of the airplane and automobile was long past, and the age of the spaceplane was dwindling. But Earth was finally cooling, and the weather not quite as deadly.

Everyone's skin was shades of brown from "tanning" themselves topside, even using ultra violet lamps underground, but the spacers were pale. What a spacer considered "dark skinned" was actually not very dark at all, as the spacers were pale from lack of sunlight. Generally, "dark skinned" spacers were descended from Africans, and "light skinned" Earthians were generally descendants of peoples in the Nordic countries, but again, everybody was from everywhere.

There were some vitamins that were naturally occurring in Earthians because of sunlight that spacers had to add to their diets. However, there were still some Earthians lighter skinned than most spacers, and some spacers with darker skins than most Earthians.

Neither group thought highly of the other group.

Mrs. Harrington would become a gossip. Only those privy to company documents would know her first name; she

was just “Mrs. Harrington” who had been widowed from Colonel Harrington two years earlier. Whose army he had been a colonel in was anybody’s guess. Even though she held a doctorate in statistics, she insisted on “Mrs. Harrington.”

She was sixty one years old and had been born and raised on Mars, and had never been in space before. She was widowed when her husband had died two years earlier at the hands of pirates, on a business trip to the asteroid Sylvia. It had been his first time in space, also having spent his life on Mars. Piracy was almost the only danger left in space.

It had been rumored that he was somehow connected to the Martian government. Actually, he had been a GOTS industrial spy. The pirates that murdered him could have actually been rival shippers. Mrs. Harrington thought the heartbreak would kill her, and was surprised when it didn’t. She heard about the trip to Alpha Centauri and thought she could escape her loneliness; she had few friends, and none close, and she and her husband had been childless as so many spacers were. She signed up, was tested and interviewed and briefed on the danger to her sanity and how the psychologists theorized that they could prevent or alleviate it.

William Lathiter was a Cererian who had moved to Mars after collage to pursue a doctorate in geology, after which he got married to a Martian and stayed on Mars. He was tying up one of the last loose ends before taking the space plane to the Titanic in three weeks, writing to his surviving friends. The worst part of old age is that your friends all die. And spouses. And sometimes even children.

Like everyone else composing a letter, he dictated it to the computer, and the computer rearranged it as if it was writing a book. Human writers had been made obsolete by computers centuries earlier.

His computerized letter read,
Dear Harry,

I’m sorry to say that I won’t see you when you get back from your Saturn run, but I only see you every few years, anyway. I’m leaving Mars.

I'm not sure why I decided to do this. Maybe because I'm old and my wife and most of my friends are dead. You're still alive but you're always space hopping. Jerry's still alive, but he might as well be dead, all he does is sit in a tavern all day. It's usually Knolls' Brewery. Ken is retired on Vesta. He jokes that he's waiting for it to finish growing into a whole planet. But we don't see each other, except on video because of the pirates, and radio lag can get pretty bad, you know. Joe's still on Ceres, he doesn't have to retire for another four years but he says they're trying to force him out. And he's a damned good electrician, has a Master's degree in electrical engineering! I went to high school with his big brother, I've known him forever.

What I'm talking about is Anglada-Escudé, but nobody has called it that for at least a century. Before I was born, anyway. Everybody calls it Anglada, except the kids. They call it Angie. Nobody knows how it got its name. After all, it's only a little more than a parsec away, so the cave men probably knew about it.

Anyway, I'm going there.

I've read up on it. Its history is really creepy.

It's a little bigger than Earth, and has some water, which is surprising so close to the star. That's about all they know about it that they didn't know hundreds of years ago.

But anyways, they've been talking about this "expedition"; they like to make it sound exciting and adventurous, since they lost the... I can't pronounce it, it's in ancient Russian; different countries used to have different

languages. It sounds like "Donner Party" to my ears, the robot ship that disappeared. That's what's spooky about it. The crazy Donner guy that held a party to kill people is a really bad name. There weren't any people on the ship, thank God. They promised that won't be our ship's name, since we're not Earthian. I don't care what they call it, as long as it's not named after a catastrophe or a villain. I hear they're calling it the Titanic, that sounds safe enough. Nice, strong name.

Anyway, they've been talking about it for years. A robot ship disappeared. So what. I kind of ignored it.

The Earthians aren't what they used to be, or so I've heard. You've probably heard too, even though you're not around much. Everything is illegal there, you know democracy died planet-wide a century ago. I'm surprised they could scrape up enough cash to send an automated expedition like that. Combustion is still illegal there, even though they've had global cooling for over a century. Mining is illegal, smoking is illegal (and I do love my ganja, almost as much as you do), and speaking out against anything concerning the government can get you jailed or shot, while we Martians can say "Mayor Putin is a pig-fucking pile of shit" or worse. I feel sorry for 'em.

This trip isn't from the Earthians, it's from a bunch of rich do-gooders from Vesta, really rich kids. The Knolls fortune kids, who think mankind can have a new, free, un-overpopulated planet. They say that Earth's four billion people are way too many, even though it was more than twice that populous before the Yellowstone catastrophe killed two

hundred million immediately, and the billions more who died from from fire and hunger and small scale war until civilization regained its balance. Glad I didn't live back then, aren't you?

I was always really skeptical. What's wrong with Mars? Hell, our terraforming is coming right along. All the ice from Saturn to fill the Valles Marineris, it's been there since before I was born, small asteroids from the belt for more mass, although they worry about affecting the orbit. And they had started digging a hole for a giant magnet to protect against cosmic rays and the solar wind. It turns out they changed their minds after a couple of fatalities and just put a lot of electromagnets around the globe instead. They have the advantage of generating carbon dioxide from carbon to help warm this cold planet while generating electricity for the magnets, and they say it's making the air pressure increase slightly. I didn't know there was any pressure at all outside the domes. They say that in a hundred years or so you'll be able to grow some species of plants at the equator, another hundred and you won't need an environment suit outside, only an oxygen mask. Eventually you won't even need that, although you'll never have air as thick as in a dome. The dome generators are still fusion, though.

It's a good thing we found all that carbon in the belt, since Earth stopped selling coal and oil three centuries ago. It's all illegal there now. Everything is, I hear.

I was walking past the Knolls brewery, you know the place, it's huge. Like always, Jerry was perched on a stool in

front of the bar, you could see him through the big picture window. I went in to say "hi." The bartender, a young, attractive dark skinned woman with curly black hair, beat me to it.

"Hi. Whatja need?" she asked with a dimpled smile as I walked up to a stool by Jerry. She must have been the child of an Earthian. It made her more attractive, somehow.

"Knolls lager, draft. Okay if I smoke?"

"Light 'em if ya got 'em." She must have been a military veteran. I lit a big hand-rolled muggle.

"Hey, Jerry, what's goin' on?" I asked as I sat down, knowing the answer before even asking. It would be nothing, you know all Jerry does is drink. I hit the doob and handed it to him. The bartender put a beer and an ashtray by me, the ash tray sucking the smoke inside itself and emitting its dim glow.

"Anglada." He hit the joint and handed it back.

"Anglada? What about it?" I dropped the ash into the tray, it giving its characteristic flash like the affordable ones always do. You can print an old fashioned ash tray like George Washington used with his hemp, but smokeless ash tray printers are specialized, expensive things. The ones like the bar had weren't very expensive, but most smokers' homes had the non-electric Washington trays any printer can make. Did they have the smokeless ones before you started your run? All the bars have them now.

He pointed to the television set. "Been watching it on the TV." I looked up, it was showing a string of GOTS ships

waiting to be set in a big circle, hooked together. Just one is huge, maybe twenty or thirty stories tall, like a skyscraper outside the sky. It looked on the television like there must have been two dozen ships connected, not yet making a circle. They only do that occasionally and only when necessary for huge loads.

"They're recruiting youngsters," Jerry informed me.

"Huh? Kids? They're sending KIDS?"

"No," he said laughing. Like I said, I really didn't follow the Anglada nonsense. "They're taking old retired people like us. Somebody realized that a lot, or maybe most of old folks get set in their ways and just don't like any kind of change. Like one guy way back in the twentieth century I read about who had used an outhouse all his life..."

"What's an outhouse?" I interrupted.

"The twentieth century was a long time ago, you know, and really, really primitive. They used to dig deep holes in the ground, far away from the house, and build a little hut with a seat with a hole, like a toilet. Anyway, this guy's middle aged son built a real bathroom in his dad's house, for his mom, but Dad kept using the outhouse until he died.

"So they figured the time dilation wouldn't bother a geezer like it does a kid, the old are mostly out of the societal and technological loop already, anyway. Old dogs and new tricks, you know."

"So what do the kids do?"

"They sign a contract and they're set for life. They're the Solar team and monitor the transmission from the Centauri

team. They've worked out a means of communication, but it's slow. Long before they reach the heliosphere they'll be impossible to understand without recording it and playing it back at a far faster speed than recorded. They're really paid well on top of the government payment and only work an hour a month except the first month, with a six month vacation every five years. They're recruiting from all over the belt. Hey, Mary, could I get another one?"

I stifled a yawn. I really didn't give a shit, but Jerry's a friend, one of the few of you still alive. Well, almost alive. "So," I said, "What's the catch?" and took a big sip of my beer and lit the joint back up and hit it.

He snickered. "Not much of one. You're not allowed much travel outside your home world because of the pirates, like anybody goes anywhere they don't have to anyway, and going to Earth is forbidden."

I exhaled, laughed, coughed, and handed it to him, eyes watering. "Earth? Why would anybody want to go to that shithole? Do you know how God damned heavy it is there? Rob had to go there for work a few years ago, says it was pure hell and the next time he'd quit his job first. But Anglada? You're goin'?"

He grinned widely. "What, and give up paradise? I'm happy right here at the brewery watching television."

The cute young bartender asked us if we needed fill ups. I did, and of course Jerry did. Jerry likes to drink. A lot. He has to take medicine for his liver, and two hundred years ago he would have been dead.

I lit the halfway gone roach back up, hit it, and handed it to Jerry. He held up his hand in the "no thanks" gesture; it *is* some pretty good stuff. And he was drinking. I put it out and put it in my tin for later.

"Yeah," I said after a good hearty cough, "it sounds awful boring. Fifty years to get there? What do you do on the way, drink and watch TV?"

Either Jerry didn't get the joke, or he ignored it. "It's sixty two years here on Mars but less than ten on the ship. They get gravity from constant acceleration. They have everything you'll find in a dome. Except you won't get to see any new movies or read any new books because of how time gets weird, and when you get there you'll have fifty years of books, movies, and music to catch up on. Four years after you get there, that is. And you're not there on vacation, they pick people who would be useful in the trip. Math guys, technicians, engineers. Of course scientists will be itching to go, even though they're long past being over the hill."

"Not much need for a geologist on a space ship," I said grinning. "Maybe they'll hire me for my guitar talent!"

He laughed. I won't play in front of anybody because I'm not a very good guitar player and I've told everybody that.

The weed was doing strange things to time. It seemed like we'd been talking for five minutes, but the clock said different and I was at the bottom of my second beer. "Another one?" she asked.

"Huh? Oh, uh, yeah." I was stoned, might as well get

drunk, too. I fired up the roach again, hit it, and handed it to Jerry, who took it this time. Probably too drunk to notice how stoned he was getting, or remember that he'd turned it away. He handed it back, but it had burned all the way to the clip.

"I wonder what its geology is like?" I wondered.

"Huh? What were we talking about?"

"We were talking about..." all of a sudden I didn't have a clue. "Uh, I don't remember."

"Anglada," said the television.

"Oh, yeah," Jerry said. I almost fell out of my stool laughing. Looking back, I'm not sure why, but it was hilarious at the time. As I laughed, the television continued, "...will need surveyors, geologists, hydrologists..." I didn't hear the rest, because I kind of wasn't paying attention. Geologists? Hmm...

You know, maybe I do know why I decided to go, crazy as it sounds. You know my wife died a month after I retired five years ago. I don't know why they won't let you work past sixty. Rob died the year before last, have you heard? Anyway, he told me that on Earth everybody had to work until they died. That stinks. Rob said the whole planet stinks like burned plastic, shit, rotten garbage, and a lot of nasty smells he had never smelled before, but I don't think he was all over the whole planet. It isn't like Mars, with a few hundred domed cities and nothing in between.

I was a mess after Angie died, right after you left for Saturn. You know both of our sons had moved to Earth decades ago. I guess they got used to the smell and the gravity after

a couple of years, you have to wear an exoskeleton there unless you're a native, you know. Even then, Earthians who have spent a decade or more in low gravity environments like the Martian and asteroid domes need exos when they get home. Rob said the gravity there was torture.

My boys thought they could get rich shipping stuff that was needed in the belt and illegal on Earth. I'll be damned if I know why they thought that, it seems that it would be easier to export stuff from the belt. But I haven't heard from them since their mother died. Both of them were married, one has a son. His wife died when she had him.

You would have thought they'd stick around to help the old man out after their mom died, but probably wanted to get rid of the grief as soon as they could. I can't blame 'em, I wish I could. I was a real mess for a really long time after she died. She was so young, only a year older than me! I'm still grieving.

Of course, you might not have heard yet that conditions deteriorated so much between us spacers and the Earthians that we won't let them past the moon, and they won't let us go there any more. Who the hell would want to? Except greedy little shits like my boys, ready to take advantage of the poor brain-damaged Earthians. What they did to their planet is a crime.

Then my boy Arnold got himself killed in some sort of freak accident, and I couldn't even go to his funeral! God damned politics. I never met my grandson, he's four. I wonder what will happen to him? His mother died in childbirth, that's

really common on that nasty planet. I hear the life expectancy there is fifty five, that's even younger than Angie and me were when she died. Arnold was only thirty eight when he died, he was ten years younger than Dave.

The boat to Anglada might be like a new life. It's not like much is left on Mars for me. Not since Angie died... come to think of it, the kids call Anglada "Angie." Probably has something to do with it. So I logged on to their website, it was being advertised everywhere. Somebody sure had a lot of money.

The website had the antique holographic background with the writing an inch in front of the screen. I haven't seen a site like that since I was a kid, have you? Nobody uses the holos any more because they're not always easy to read, and they give some people headaches.

There was a button, or a picture of one, to click to get rid of the Grandpa Olds setup and replace it with something more modern and easier on the eyes. I wish people who program this stuff would think about things like that.

Well, anyway, I need to get ready for the trip. The ship leaves in three weeks.

Write back! I hope I see you again, buddy.

He hit "send" and went in the living room with a jar of beer and a pipe. He hit the pipe, took a big sip of his Knolls, and picked up his guitar. Who cares if you have no talent if you enjoy it?

Elsewhere on Mars, Bill Kelly was two hundred forty five years old. Going by the calendar, that is. If he'd spent his whole life in one place he would have died well over a century earlier. But his actual age, in the time that he had experienced personally, was sixty one, according to the GOTS records from the various vessels he had captained. He was living in a

houseboat in a Martian dome.

Bill was a retired GOTS ship captain whose favorite runs had been runs that could teach him something, which usually meant cargo runs, preferably long runs without human cargo, so he could read. The longer the trip, the more time outside the ship stretched; or inside it, shrank. It depends on your perspective.

He hadn't experienced the time travel madness because he wasn't out of society's reach, even if the radio *did* sound weird, and he didn't have the effects in the strange shrunken time you get with spending years accelerating, like the ill-fated Sirius craft had. But there was almost always something new to learn, because of how fast time went outside the ship.

They had solved what they had called the "vibrato problem" where streamed digital audio breaks into small chunks as a ship travels fast enough, by stretching the analog sound that the digital signal had always needed to be converted to. The faster the distance between your radio and and one traveling was increased, the slower and lower pitch the sound was. It sounded as if they had transmitted an analog signal rather than digital. It had its limits. At a high enough speed, streaming just wouldn't work.

Bill was a born nerd. At one time a century or two earlier when he was young, he had managed to get a third of a G out of batteries; a G is an Earth gravity, a third is about like on Mars. Mars gravity is about the top thrust of a fission ship. He tried to explain how he got that much thrust out of batteries to the engineers, but they couldn't understand him; sometimes autistics like Bill have communication difficulties. And often self-taught folks like Bill didn't have the proper vocabulary to convey the knowledge of something he had figured out to someone who had learned the subject in school. Think Michael Faraday, who confounded his fellow scientists for lack of the means to describe electromagnetism; James Maxwell finally explained what Faraday knew with the mathematics Faraday, who had little formal education, lacked.

He had married a scientist he'd met on a run when his ship had crossed paths with an old friend of his, another GOTS

captain, in space. Bill retired from being a space captain after he got married. They lived on Earth, in Arizona. Back then, Earth wasn't all that bad except for the gravity and the storms, as it was still democratic, and Bill had been born in Toronto. She, an award-winning psychologist, was the love of his life. He would have followed her anywhere.

Then they fell out of love and were divorced and Bill got his old job back; they hadn't wanted to let him go in the first place. He moved back into his houseboat after the divorce, and lived in it on Mars between runs, then after his mandatory retirement, until GOTS called him again.

He would have died over a century earlier if he hadn't gotten divorced; in real time rather than the time he was living, anyway. At speeds from a thrust of a third of a G or more, time gets strangely weird, enough to be noticeable. But when you're in space for months, you wouldn't know how much time had passed, anyway. Three months to a Martian was between two weeks and a month's worth of entropy on a ship, depending on its thrust and how far it went. The last time he had seen her was when she was eighty seven. She looked a hundred eighty seven, he had thought, and she had been born twenty years later than him. He had been captain of a space ship when she was an infant.

Bill garnered forty two patents. If that doesn't make you a nerd, I don't know what does. He was no dummy. But all good things must come to a stupid end, and he was offered a choice. Retire and enjoy retirement, or retire and hate life.

The logical reason was, well, beyond the reach of most of us because, well, face it, we don't really use our heads very often. We're dumbasses. But Bill was pretty logical, the nerd.

He was happy tinkering in his workroom, and was even happier when they called him to pilot a boat to Anglada. Wherever that was, one of the asteroids he hadn't been to, maybe, or some moon somewhere like around Saturn or Neptune or somewhere. They were not only going to have him pilot a craft, but they said it was going over a parsec away! Let's see, what's a parsec in AU... gotta look that up...

He didn't let on, but he would have been happy piloting

a garbage truck to Deimos and back every day.

He had been living on Mars between runs and after retirement, and sold his houseboat when he found out how long the trip was going to be, as all of the docks were all used for linking the ships together. The landing craft were stored in one of the ships in a giant airlock, still too small for a large houseboat like Bill had. Taking it with him this trip was out of the question.

A lot of spacers were on the expedition because they were having a hard time at things, and all of them were in life's senior years. Mary Watkins was one of them and sick of life. She was sixty three years old, and had been married three times and divorced twice. Her second husband had died of some cancer or another. She didn't bother wondering if she was still a widow after she married Alex, that asshole.

Mary was a gambler, and after taking her third husband to the cleaners in court, the gambling machines cleaned her out, but good.

She was three years too old to legally go back to work; the mandatory retirement age was sixty. That was the law. There weren't enough jobs for the young, and after age sixty you got a bigger government check.

Mary thought it was stupid. The law had started centuries ago, when the overpopulated Earth was in charge of the whole solar system. The whole universe, the arrogant sparkheads thought. Stupid. The spacer communities needed workers!

She was fine when she could just spend her days gambling. But her luck had run dry, followed by her ex-husband's money. She had done well at first, earning more than him as a microbiologist until the divorce when she was fifty eight. The asshole should have left that young bimbo alone, and especially should have made sure nobody got video. It's not like it's the year 1666.

Mary walked into the bar not long after Jerry had left, and sat at the same seat. There was a man who had also come in after Jerry left, sitting at a corner and strumming a guitar and doing some very impressive classical pick work. Mary

ignored him. The bartender walked up. "Hi, Mary, the usual?"

"Hi, Mary. Yeah."

"...spend the rest of your days in paradise!" the television squawked. Mary gave Mary her beer as Mary lit a one hitter. "Got an ash tray, Mary?"

"Sure, here you go."

"Do you wonder how long your Flatingstrigger will last?" the television asked. "Our insurance..."

"What's that TV going on about?" Mary asked.

"The Anglada expedition."

"The what? What's an anglada?"

"It's a planet named Anglada. It's more than a parsec away and they're going there."

"What's a parsec?"

"Hell if I know."

The television, or rather a person pictured on it, said "They're letting people work after sixty?"

"Yes. In fact the minimum age is fifty five," somebody else pictured said.

Mary had been a microbiologist. "Hmmm," she said. She thought she smelled money.

The guitar player, Bob Black, was so good he didn't even have to think while playing, unless he was learning a brand new song. His fingers knew where to go and what to do, and as he played, his eyes were on the television.

Bob was a celebrity throughout space, widely known as the best guitarist in the solar system. All of the recorded music came from Earth, and on Earth, music had lost all of its charm and magic. It had become just another money making commodity that had lost all of its artistry and heart when computers took over writing and performing art, music, and literature. There were few human artists left anywhere, and no professionals; musicians lived on their government check and seldom were ever paid for performing. What non-artistic people don't understand is that writers must write, musicians must play, sculptors must sculpt, and there's little if anything they can do about it, they're as good as addicted.

Bob's fame had started to become annoying to him.

That woman who had just come into the bar was one of the very few who didn't fawn over him and ask for an autograph like the bartender had. At least he got a free beer out of it. He had become very tired of being famous, and the trip to Anglada seemed an escape from his fame. He wondered if they would want a musician? He would be fifty five right before the takeoff, barely old enough.

On Ceres, meanwhile, Joe McCarthy didn't know what he was going to do with himself. He was an electrician, a fusion generator technician with an engineering degree, and a damned good one. The trouble was, he got that good with years and decades of experience, and now he was going to have to retire in three years, damn it.

He left his shift at Ceres generator twelve to go home to a ranch style house a few kilometers away. All the houses in the dome were the same, except for color and orientation. All had been printed from the same pattern by the same printer, with utilities and other fixtures later added by robots.

He had been arguing with his boss about the equipment. There was one part in particular that Joe said urgently needed replacing, and his boss basically told him the vulgar spacer version of "go fly a kite" with an added insult, the little twerp.

Joe was in a pretty bad mood as he limped to his floater. With Ceres' weak gravity, wheeled vehicles were useless. Most people didn't even use floaters, since everywhere was walking distance, but Joe had injured his leg playing zooterball, and the government bought him one. Floaters floated on air, propelled and steered by small fans under the vehicle and piloted by computers. He cursed as it almost hit a garbage can, then slowed down. As he cursed the computer that had almost dented his floater, he tried unsuccessfully to get out of his bad mood. No sense making a bad day worse.

He got home and went into the kitchen and unsealed a jar of beer and took it in the living room and turned on the video, and filled his bong. The television was showing a disaster from history, when Ceres had a power failure and a serious air leak.

He changed the channel. He didn't want to think about the power company and his stupid asshole boss.

"...ot completely destroyed, but will be out of service for a month while it's rebuilt. And now the weather." It didn't help his mood. *What* was going to be out of service? And this channel had no rewind.

He changed the channel again, then thought, "weather"? Were we going to get hit with another meteor shower? The last one had damaged the dome. He changed it back. "...of the choicest beef. Shop..."

Damn it. He changed it again, and song and laughter filled the air. "The hills are alive, with the sound of Yoshiyosh." A different voice, unaccompanied by violins and harps, said "Yoshiyosh, the belt's finest malt liquor." He grinned at the thought of a parody of that commercial he'd seen, where the music had been accompanied by the sound of someone being violently ill.

"And we're back! Fascinating, Doctor Miller. So you think the elderly will be fine on their return?"

"That's the theory, they'll see when they return, most of the rest of us will all be dead from old age by then. The dangers are explained well to them."

This was strange, and interesting. Elderly? You never heard of the elderly on the news. But then, he seldom watched the news, he was just stream surfing.

Twenty minutes later he was at his tablet to sign up for the trip. Fuck that young twerp and his biased attitude towards those his senior. With his extensive training and experience with fusion generators he was sure to be picked.

He thought back to school, decades earlier. His classes said that the first fission generators had actually been only steam power, and the only difference between fission and coal generators had been the heat source and the pollution they left behind. The newer fission generators changed the gamma rays and other radioactivity directly into electricity, like a solar panel changes photons to electrons, with no waste or pollution besides its manufacture, and a lot fewer parts. And the old steam generators produced radioactive waste, which

was almost as bad as the poisons and carbon released into the atmosphere with coal. The modern fusions captured the energy released when hydrogen atoms fused together to become helium, a very useful element, instantly changing the released subatomic energy particles to electrons and channeling them. It had taken centuries for people to figure out how to do that; the first fusion generators those centuries ago also used steam to generate electricity. The age of steam was hundreds of years earlier.

The web site looked like it was made back when fission generators ran on steam. There must be a way to normalize this thing..

Meanwhile on Earth, Billy was lost. Not in the sense that he didn't know where he was, he was in the hospital. It was in the sense that nothing made sense. Daddy had died, and he was living at Uncle Bill's house now. Uncle Bill and Aunt Nancy were nice, but they weren't Daddy.

He didn't know what to do without his daddy. And then Aunt Nancy went to jail after the police shot Uncle Bill and him.

Billy spent a lot of time crying. He'd loved Daddy so much, and Aunt Nancy and Uncle Bill were always so nice to him. He also spent a lot of time in useless rage, but tears were no more useful. And at his age he didn't ponder things like that, anyway.

Billy was sitting next to his uncle on the couch when his uncle was shot. The bullet that killed Uncle Bill had grazed Billy's side, and he would have a prominent scar. Very unusual, but it would go away with time and doctoring.

Then one day a strange looking woman came into his hospital room. She wasn't dressed like a doctor. "Hi, Billy. I'm Mister Norton."

Mister? He... she? Had no beard, but sounded like a grown up man.

"Hi, Mister Norton."

"You don't have any relatives on Earth?"

"Only Aunt Nancy, but the police took Aunt Nancy away after they shot me and killed Uncle Bill."

“We’ve found that you have a grandfather on Mars.”

“A what?”

“A grand dad. Your father’s father. Would you like to go to Mars?”

“I don’t know. Are they mean like they are here?”

Norton scratched his jaw. It made a sound. “I’ve never been there, so I don’t know. But I’d go if they let me.”

“You can’t go?”

“No, Earthians aren’t allowed past the moon. But your grandfather is your nearest relative, and he’s a Martian so you can go. I wish I could. All that the government knows what to do with you is to send you to your grandfather on Mars. I’ll be back next week when you’re released.”

“Uh, g’bye.”

“Goodbye, and good luck.”

The beardless man left and Billy started crying again. The hurt in his soul was even worse than the hurt in his side.

In Orbit

Like the Cererians and other asterites, most Martians walked everywhere they went, even if it was from one end of the dome to another, and the domes on Mars could be up to thirty five kilometers diameter. But walking with a loaded backpack or a weighted gravity belt was the best, and was about the only way to get any exercise on Mars that didn't require gymnasium equipment.

Will's backpack wasn't loaded and only had some "good luck charms" that were actually just keepsakes, and a few changes of clothes; he could print more on the ship. They told him that the robots could print a new guitar that was better than his Martian guitar. He had sold his guitar despite not really believing the replacement would be better, along with everything else. He then deposited the proceeds in a savings account. He should have a nice sum when he returned, especially with the payment he would receive for the trip. Not much would be needed while traveling, it would all be supplied on history's second manned interstellar voyage.

His walk was more like a very long lope, three meters between steps, without a gravity belt.

He had received a very troubling call that morning; his son and his grandson had been shot by the police, his daughter in law was in jail on some "security" charge, and his grandson had survived the gunshot and was in the hospital. He wondered what would become of the boy; there wasn't anything any Martian could do about anything those crazy Earthians did. You couldn't even go there.

He thought about how if he ever met his grandson, the kid might be older than him! Or at least, look older. He sighed. He figured he'd probably never get to meet the kid.

Mary and Mrs. Harrington were already in their seats,

waiting for takeoff. Mary was in a window seat, Mrs. Harrington in the very last row by herself.

It was a GOTS surface N-67 spaceplane, designed for travel from Mars' surface to orbit and back. The GOTS interplanetary craft could land on the far less massive asteroids, but not Mars. It waited, parked in orbit above Mars. Asterites were already aboard the orbiting ship, having boarded from their asteroids. From Mars, it would head straight to Anglada.

An outrageously dressed man boarded and walked towards the front section, and sat down next to a window. Mary had only seen clothing like that in old photographs, and was amazed that they were still being made; they looked brand new. Probably printed them out from an antique catalog, she finally thought.

Bill sat down in the front next to a window, glad that he had bought a dozen pairs of Kadiddlehoppers, the most comfortable pants he had ever worn. They had gone out of business after the next run he had taken after buying them, and nobody sold clothing any more when he got back. Everybody was printing their their own clothes out these days with a brand new thing called a "loom." There were different kinds and brands, but basically to print clothing you put a big spool of thread on your loom, uploaded a pattern to it, and it prints clothes. Of course, you needed a thread printer to print thread, but most people just bought the thread, which could be reused, although it seldom was. Expensive fancy looms had up to five shafts for five spools of colors or thicknesses of thread. He considered getting one; ship's captains were paid pretty well and still received the government payment, but he had enough clothes. Again, he was a nerd.

Apparently the Kadiddlehopper's pattern had been lost. Bill had read that it was from hubris and a lack of imagination that lost both the pattern, and the company itself, although it seemed to him that the invention of the loom was what had destroyed the clothing industry. Kadiddlehopper was behind the times and hadn't switched to selling patterns, like the other clothing manufacturers had.

William came in, dressed more conservatively, as well as several other passengers. He sat down next to Mary. She figured she'd clean this old sucker out, wondering how well off he was, and forgetting that there would be no use for money until they were back home in the solar system when they would all have plenty.

Unlike the Sirius expedition, this one did involve psychologists. Jerry Morton and Ralph Wiebe had their doctorates from Harvard for Jerry, and the University of Illinois for Ralph. Both schools were on Mars, originally branches of Earthian schools. They had both grown up and gone to high school and undergraduate school together on Ceres, where they had returned after college and had boarded the Titanic from.

They were the only ones on the ship younger than the rules allowed, in their early fifties. There were a dozen psychologists back on Mars with the children, where the Solar Team was based. The psychologists in the Solar team were all young, selected as teenagers who had shown promise of being good in that field. Despite holding doctorates, the oldest was only twenty six. But only Ralph and Jerry would be on-board. They were by far the oldest psychologists on the project. Both had joined the nascent project while in grad school on Mars; planning for projects like that can take years.

The families of the asterites in the Solar team had moved to Mars for the project. Like their children, they were now set for life and not dependent on the government check, although they still got one, like everybody. Robotics and artificial "intelligence" had taken almost all jobs, and psychologists were highly sought after.

Ralph and Jerry collaborated on the psychological training, trying to impress on these volunteers the huge amount of change to expect when they got home. They would be studying everyone to see if there were other causes besides the obvious societal changes.

The plane filled up, and one last straggler came onboard carrying a strange looking suitcase before the doors were closed, the seat belt and no smoking signs lit up, and

everyone strapped in for takeoff. Will put the roach tin back in his pocket and smiled at this strange old lady who seemed to be hitting on him.

The plane took off and the signs darkened. It would be an hour or two before reaching orbit and everyone was on board the interstellar spaceship, and in their apartments. Will lit his roach back up. Apparently Mary... wasn't that what her name was? He hadn't been good with names even when he was young, and it was a lot worse these days. He forgot what he was thinking about.

Bill wondered who was piloting the Titanic, besides himself. There were supposed to be three pilots, but they couldn't find a third who was both qualified and in good health. As it would have to be someone who was ancient, it was almost certain he would know him.

Or her, he corrected himself. Even though women ordinarily disliked piloting space ships, there were still a few who sought it out.

He took out his phone and continued reading a book he had started two days earlier.

The ship to Anglada was in orbit waiting for them.

Although most of the people on the trip held doctorates, only one person was called "Doc," Harold Guisewild, the physician. His was probably the second most important job on the ship, after the captains, especially since older folks like the people on this ship often come down with physical ailments.

He was the only physician they could recruit, and his specialty had been pediatrics, rather than geriatrics. He had brought an extensive medical library, although most if not all of it was sure to already be in the ship's library.

He could synthesize any drug he needed, as the fusion generators could turn hydrogen into any element, which could be combined in any combination one wished with the right tools, all of which were on the ship. Three of the connected ships carried nothing but water ice, which fusion physics and chemistry could easily change into anything.

Of course, all of the passengers had been thoroughly

examined physically, and especially mentally, and many prospective crew and passengers had been disqualified because of lung, circulatory, mental, or other problems. At least, thought Doc, they're all healthy. He, himself, was sixty four and had come out of his forced retirement for this trip.

Damned shame to make a healer stop healing, he thought. Still in orbit, with the spaceplane just getting getting ready for docking, he floated down to the commons area. In the commons there was a bar, restaurant, auditorium for hologram and old two dimensional movies, performance stage, and everything you would find in a modern entertainment center except for the performers, stage hands, and others needed to run live shows. He wondered about that; these days entertainment was computer-generated holograms. Real stages had fallen out of favor long ago. The commons also housed various games, like darts, pool, cards, and video games on every holographic tabletop.

He wasn't hungry, and it wouldn't have mattered anyway, since they would be weightless until the ship started moving. How could you eat in weightlessness?

The table and chair feet were electromagnetic, as were tabletops, just for safety. Not just while weightless, but sometimes when there were pirates, a ship's captain had to do some pretty fancy maneuvers that would have broken things not held down. That included bones, so people always strapped in when there was any real danger from pirates, and the electromagnets were high powered when necessary; they adjusted themselves.

The ship was brand new and state of the art. A new paint had been developed on Doris that acted as a holographic video screen, and all the walls and most flat surfaces were painted with it.

The commons was situated near one of the airlocks, and he just wanted to eye his fellow passengers. A robot came up as the airlock opened, and he ordered a cup of coffee. One of the downsides of the trip was no human wait staff like back in the worlds. Nobody had ever liked robot waiters and bartenders.

The people started floating in through the airlock,

gentle breezes propelling them to their quarters, guided by the tickets in their phones to their flats.

It looked to Harold like there were a few dozen, maybe a hundred, counting the asterites who were already on board. He thought to himself that he shouldn't have ordered the coffee, as he couldn't drink it until there was gravity. Gravity would take a while longer, he thought, when the robot came back with a sippy cup and its plastic bag of hot coffee as had been used in weightlessness for centuries.

This was Harold's first trip in space. Vesta had one of the best universities and *the* best medical school in the belt. Maybe the best in the solar system. He had been born on Vesta and lived his life there. He sipped his coffee from the cup, as had been done in space for centuries. "I hope they use regular cups when we get gravity," he said out loud to himself.

Bill floated to his quarters. They would be right by the pilot room, as would his fellow captain's. He wondered how this was going to work. Depends on who it is, he thought. It was strange to him that the other captain hadn't greeted the rest of the crew and expedition members. *He* would have, and had thought everyone did.

Bill had never co-piloted a ship, and never had heard of it ever being done. As his door opened, so did the other captain's, who floated out and glared at Bill. "Shit," the other captain exclaimed, "I should have figured those assholes would send you."

Bill frowned. "Hi, Mort." Morton Salter had tried to run Bill's best friend, John Knolls, out of GOTS over two centuries earlier, stationary time. Bill had nearly gotten Salter fired when Bill was defending his friend, and the victory was sweetened even more when his friend had married the company founder's daughter. Bill was sure that Salter hated his guts.

Salter replied simply, "How we gonna work this?"

"How about twelve hour shifts?" Bill stated.

"Okay, you're it, then. I've been on duty a hell of a lot longer than twelve hours. Oh, the engine and generator inspections are both really late."

“Wait, I need to...” Bill said, as Salter’s door shut.

“Bastard,” Bill said, going into his quarters. If he knew he was going to have to put up with that jerk, he would have stayed in retirement.

Will was having his own problems. As he floated down the corridor, Mary floated alongside him. He hoped his apartment wasn’t close to hers and feared it might be. And she kept jabbering, he thought. Why should I care about her damned puppy?

Apparently she had bought a puppy to take on the trip before looking to see if it was allowed, then getting angry when it wasn’t. A stupid old woman being childish, and the old bat kept hitting on him. Odd how more buttons on her blouse were open now than on the plane. Did she think she was seventeen?

It was tiring. And saddening. This woman had everything his wife hadn’t had that he hated, and nothing his wife had that he loved.

The breezes started to separate them, and she took his elbow. “Wait!” she said.

He loosed her fingers from his arm. “See you later,” he said, hoping it wouldn’t be too often.

Bill threw his backpack where it would fall on the bed when gravity returned, and then went to the pilot room through the door connecting it to his quarters. He dreaded the stairs down to what he called the dungeon, where the generators and engines were, even though there weren’t any stairs used in weightlessness.

There was no need to bring much of anything on the trip, as there were ships full of provisions that had about anything anyone would need, or even want. If there was anything that hadn’t been thought of, the robots could construct it.

Except Kadiddlahoppers. Bill had brought his outrageously comfortable and out of style trousers.

Three ships carried solidified dihydrogen monoxide, and two had landers, satellites, and other tools for exploring the planet and its star. They would be connected together at

the sides for the trip, acting as a single ship. They were all strung together now, and the circle would be connected before they left orbit.

With twenty six ships in parallel, Bill figured he could get at least five gravities out of it, maybe three times as much, but these Asterites and Martians couldn't take that much weight, even if they hadn't been geriatric. Actually, fifteen Gs would kill anybody. Whoever was paying for this trip sure was going all out.

He read the logs and was delighted to find that he wouldn't have to go to the dungeon, since it said there was an electrician whose job was engines and generators. Named... lets see, Joseph McCarthy. Oh, and another one, he saw, Walter Rollins.

Bill grinned at the estimate of when they would get to Centauri. Schedules were never right and never could be, since there were far too many things that could slow things down or even speed them up. And with travel that fast and for that long, time is pretty meaningless, anyway.

He decided to go to the commons and meet some of the passengers, glad that he only had to inspect this ship's cargo; most of his cargoes were in the vacuum of space, only the vacuum of space was in the ships themselves, their environment seals deliberately unsealed. Nothing oxidizes without oxygen, and little can spoil when frozen, so he wasn't required to inspect them.

"Commons," he said. His phone was already programmed to fit the ship's electronics and communications, with an invisible company upgrade it had installed earlier. Breezes blew him towards there.

"Damn it! Stop! Return!" He'd forgotten his damned hat. You weren't captain without the hat. He retrieved his headgear and returned back towards the commons.

This wasn't Bill's day, it seemed.

It wasn't Will's, either. "William! Wait!" an old woman's voice screeched as he floated down to get a beer.

"Damn," he said, and pretended not to hear. It didn't really matter, because in weightlessness, you went where the

breezes went and at the breeze's speed. Bad time to go for a beer, he thought.

He pulled a muggle out of his pocket and lit it with his electric lighter. They had used flame hundreds of years ago on Earth, he knew, but those lighters had been outlawed because of the global warming that combustion of fossil fuels for hundreds of years had caused, the beginning of Earth's becoming a hellhole. This was back when humans hadn't physically gone past the Earth's moon, although probes were sent, before the humans had moved underground to escape the weather's wrath. He was glad the lighter ran on electricity. A flame would have blown out in the propulsion breeze, but you would still need a flame for a bong or another kind of pipe, or at least a laser lighter. Of course, in weightlessness a bong was out of the question.

He floated into the commons and grabbed a chair; literally, to stop his forward movement. It skittered across the floor for a few inches as its magnetism strengthened, and stopped as Mary floated in, followed by several other floaters, including Captain Kelly.

“William! Hi!”

“Hi, uh, ...Mary.”

There was an embarrassed silence before both of their phones said, in unison with everyone else's phones, “Hi, folks, I'm Bill Kelly. I and Mort Salter will be taking shifts as captain. We will be leaving orbit as soon as the ships finish connecting, so if you're ordering drinks, I'd wait until we're on our way. Hope to meet you all one by one soon, but right now I have to go to the pilot room. Joseph McCarthy and Walter Rollins, could you please meet me there?”

After meeting and getting instructions from Bill, Joe thought Captain Kelly seemed like a nice enough guy, as the breezes led him to where he didn't know that Bill called “the dungeon.” It was named for its stairs, which Joe would find out soon enough were the torture equipment in this dungeon, and it was as hot as hell down there when the engines or generators malfunctioned.

Right now, the engine room just made him feel at home.

Marveling at its engineering and workmanship, he wondered why Captain Salter hadn't sent him down here. He finished inspection, floated upstairs, and called the captain, who had said "Call me Bill," to inform him the inspection was completed and he was upstairs. He wondered why Bill had told him to call when he was upstairs and not when the inspection was finished.

He would find out soon enough, the first time he went up those stairs with gravity. He would soon call the engine and generator rooms "the dungeon," too. The only thing he wouldn't like about his dungeon was escaping from it.

Takeoff

Bill was an expert at this, so much that it barely dawned on people that they were slowly sinking to the floor and needed feet for the first time in a while. When weightless, there's no up or down as far as your inner ear is concerned, but your eyes know that tables and chairs don't stand on the ceiling.

He picked up his phone. "Attention, please, folks. Gravity is going to get very uncomfortable for a few minutes while we leave orbit, even for you Martians, so please sit or lay down somewhere soft. Thanks for your cooperation." The ship had traveled from asteroid to asteroid at Ceres' gravity.

There were at least two "acceleration chairs" in every room except for the bathrooms, and all of the auditorium seating consisted of acceleration chairs. They had straps to keep you immobile in case of extreme pilot maneuvers, like dogfights with pirates, and hydraulics to lessen the force. They would have to "burn engines" at a half gravity to leave Mars' gravitational field, more than twice what asterites were used to and enough to make a Martian uncomfortable.

Actually, Bill knew that a third of a gravity would get them out of Mars' gravity well soon enough, but that extra push made the math of steering to Centauri much easier, and the bean counters said it made it cheaper. And they would have to feel real gravity soon enough, as Anglada was slightly bigger than Earth. The thrust would gradually increase from a little more than Mars' gravity until it was slightly more than an Earth gravity. Nobody would notice.

Nobody but Joe and Walt. They had stairs to climb. They'd notice for sure.

Sylvia Hestor from Pallas was originally from Ceres, but her parents had moved to Pallas when she was two. She didn't

remember Ceres, but certainly remembered all the jokes about her name. But she had been named for a great grandmother on Earth, not the asteroid named Sylvia.

She laid on her bed rather than the acceleration chair. As the increasing weight squashed her into the mattress, she wondered if this was worth it and how long this horrible weight would last. She could barely breathe!

It only lasted forty minutes, but it felt like hours to everyone on the ship. Everyone but the captains, who were used to far more thrust.

When he lowered thrust back down to 3.3 G, Sylvia called Bill. "Captain Kelly?" she said, "Would it be possible to reduce the gravity a little more? And send a gurney around, I fell down trying to get out of bed and I can't get up."

As he summoned the medic (civilians called the medical robots "gurneys," as they resembled the wheeled tables called "gurneys" in antiquity), his phone lit up with calls from most of the passengers. "Too heavy, huh?" he said without answering, and lowered thrust down to about Pallas' gravity. At this low amount, he thought, it will take centuries to get there. Not that he did the actual math, that guess was wildly wrong. But he pulled up the programming interface and made it so the engines would gradually but imperceptibly gain thrust as they went. He wondered why whoever edited the rule book didn't take into account all the asterites?

At the "halfway" point that wasn't really halfway, but was when the braking maneuver was done, they would be at a full Earth gravity, possibly more. The computers would compute the necessary computations. At least, that was what they were designed to do, but machinery malfunctions. That's why there were four main computers doing an awful lot of arithmetic.

Then he sent a ship-wide message saying that gravity would be lowered and he was sorry for the inconvenience. If he did it right, nobody would even complain at over a full gravity.

Then he went to lunch. Things were starting to normalize. Everyone would have a chance to talk with their counterparts on the solar team starting tomorrow, and it

should be purely routine from now on.

He hoped.

Walt's first foray to the engine room was after gravity had dropped down to lower than Ceres' gravity. Unlike Joe, he was an electrician because training had become available, and a job was a job and money was money, and he was easily bored. After his forced retirement, that he had actually looked forward to, he had just been bored. It shouldn't have surprised him.

But this ain't too bad, he thought. This was a hell of a lot better equipped than where he was before he retired. And there weren't any damned kids bossing him around. At the low gravity, the stairs weren't even torture. Yet.

That evening after dinner, if such a thing as "evening" could be thought to exist on a ship like this, Bill went to the commons for a beer before turning in. The smell of a lit muggle hit him in the face as he walked into the commons; Will and Mary were at the bar smoking and laughing. He took his beer back to his quarters. He hated that smell and wished the company would disallow smoking. Surely they had brought smokeless ash trays? This ship had everything else, surely they hadn't skimped on ash trays and gotten cheap junk! He would have to look tomorrow. If there weren't any he would have the robots construct some. That was something they couldn't do when he was first hired, but that was a long time ago. The new printers could print molecules from atoms, and anything larger with precision down to the molecular level.

It was Salter's shift an hour after Bill's head hit the pillow. When Mort got on duty, the first thing he did was curse out loud. "God damn that asshole!" he exclaimed, referring to Captain Kelly, and shoved the thrust back up to the point three four gravities the book prescribed.

The sudden increase in thrust woke Bill suddenly and startlingly. He jumped out of bed to react to the obvious emergency before his brain woke the rest of the way up and he remembered... Salter! That damned moron! How could anybody that stupid even find his way out of the uterus? The damned doctor probably had to stick his hand in to guide him

out.

He got back in bed, feeling sorry for the fool who would soon feel his passengers' wrath. He went back to sleep with an evil grin. Well, he thought, the idiot asked for it!

The psychologists both knew that there would be a reckoning for the captain. They needed to do nothing. Harold, on the other hand, was very busy. Some of the elderly passengers had fallen from the rapid gravity change, one of whom had broken her arm, and seven who were having a hard time breathing. He would have a word with Ralph and Jerry when he'd finished treating all these patients. Lucky nobody had a heart attack!

Meanwhile, back on Mars the children were being situated. Parents were again meeting with the teachers, the staff psychologists.

Billy was the only one without a parent. When he had reached Mars, his grandfather had already left and was on his way to Anglada, as if a four year old could know where or even what Anglada was.

So a married pair of psychologists on the Anglada mission's Solar team became Billy's foster parents. George and Mildred seemed like nice people. Aside from the foster child Billy, they had no children. Many spacers didn't, although there were more than enough babies to replace all the spacers, but families with more than three children were rare. This was unlike Earth, where, George heard, they breed like crazy. Probably makes up for the short life expectancy.

Today Billy was going to meet his grandpa for the first time, over the video link. It would seem like a normal phone call for a few weeks, the grownups said, then would look and sound funny later on. They would find out that their math was wrong, that psychologists were no better at orbital mechanics than historians were.

Bill was awakened again, this time by an enraged Mort, screaming through the phone. "God damn it, Kelly, what the hell did you tell these fucking people?"

"Be with you in a minute," he said, and rolled out of bed. That moron, he thought, it's still heavier than these poor

people are used to. A whole lot heavier.

The robot had started perking coffee when it detected him arising. He saw that he was on duty in forty five minutes as he got dressed. Should he wait until he was on duty to speak to Mort?

No. It would serve him right, but no. Idiots can't help being stupid, no matter how annoying they can be sometimes. And it would be that much longer that these poor asterites would have had to be tortured.

The modern coffeemakers were fast, and the robot handed him a cup of coffee just as he was fastening the last of his garment's fasteners. He walked through the door in his quarters that opened directly into the pilot room, sipping from the mug.

Normally wearing the pale complexion that every spacer wore, Salter's face was bright red. He screamed "Damn it Kelly, what the hell is wrong with you? What did you tell those damned people?"

Bill sighed, and softly said "Mort, look, I didn't say anything to them. I raised the gravity like the book says and all hell broke loose on my phone. None of these people have ever experienced gravity that heavy before, and some of them can't even walk that heavy. I programmed it to make our passengers happy while getting us there at the same time."

"Look, asshole," Salter shouted, shaking his finger at Bill like it was a shaky firearm he could shoot his head off with, "The god damned book says..." and his eyes got big and he collapsed on the floor with his eyes still open, his red face rapidly turning pale.

"Mort?" He put his coffee down and felt for a pulse; there was none. He reached for the emergency heart robot that hung on the wall when the Vestan doctor rushed in, panting and sweating, and tore open Salter's shirt, and put something on his chest and watched a tablet.

"Is he going to be all right, Doc?"

"Don't know yet. Got a pulse, we need to get him to the hospital."

Civilians, Bill thought dismissively. A medic rolled up

and lifted Morton on to itself, and rolled towards the infirmary while putting a tubed hypo patch on Salter's arm, with the doctor following. As the pilot room door opened, there was a small crowd outside with about two dozen angry people. The doctor glared at them, and didn't even need to speak. They quickly moved aside as the doctor and medic went past and the door closed.

Meanwhile, Bill rapidly ran the formula he had programmed the day before, and the gravity started getting lighter. He walked outside. "Can I help you folks?"

They looked at one another. Had Captain Kelly punched Captain Salter and knocked him out? "The weight," one said, when another asked "What happened to Captain Asshole?"

"I don't know, he was pretty angry when he collapsed. What did you folks tell him?"

"Well, look, Captain,"

"It's Bill, but go on."

"Look, I never felt weight like that before. It's horrible. If I'd known it was like that I wouldn't have signed up."

"Well, look, folks, Salter can't help being stupid. He got mad when I tried to explain that you folks aren't used to gravity like that. He'd probably been steaming for hours. I'll see if Ralph will try talking to him again when he wakes up. *If* he wakes up, that is, he's pretty old, you know. Doc doesn't know if he'll make it."

His phone beeped. He looked at it and said "Excuse me, folks, there's something I need to take care of," and went in the pilot room and closed the door.

Charles Ramos from GOTS security was on the phone. His family had worked for the company for generations, all in security. Bill had known his late great great grandfather, who had been in charge of all company security and had been about Bill's age. Of course, both the company and security were far smaller then.

"Hey, Charlie, anything serious?" Bill asked. "Do we need to strap down?"

"Probably not, but there's a small fleet of maybe half a dozen coming towards us. Probably legitimate shippers, but it

could be pirates. Thought you'd want to know."

"I do. Thanks, Charlie."

The phone beeped again. It was the psychologist, Jerry, who was one of the ship's two real leaders, although only they knew that. "You're due to talk to the solar team in half an hour, Captain."

"Thanks for the reminder, but there's a problem that I'm not allowed to discuss with passengers. I'll have to postpone the video visit for a little while."

Jerry already knew, having been alerted by the computers. "Okay, thanks. Let me know," he said.

"Oh, and Salter had a heart attack or something over a mistake in the book, could you have a word with him if he wakes up?"

"Oh? Yeah, thanks for informing me," despite the fact that he already knew Mort was in the infirmary.

It looked to Charlie like the oncoming fleet was coming straight for his own fleet. Two in Charlie's fleet were ahead of the Titanic, two behind, and eight encircling it. All were armed with lasers, rail guns, EMPs, and atomic explosives. He picked up his phone and adjusted the ship's radio frequency.

"Oncoming fleet, you're on a collision course. Please respond." Of course, there was almost no chance of collision in the vastness of space. There was no answer to his hail.

"Unknown ships, change course or you will be disabled." There was still no answer.

"Watson, break ranks and take 'em out."

"Atomics?" Watson answered.

"Negative, unless absolutely necessary. Use an EMP."

"Aye, Captain."

EMP was an acronym for electromagnetic pulse, which was what this weapon loosed. It was basically a giant capacitor, holding enormous amounts of electricity which was fed to a huge coil all at once, producing the pulse of electromagnetism. The pulse from Atom bombs in Nevada in the nineteen forties would drain car batteries and blow fuses for miles. An EMP did no visible damage, although electronics would all be destroyed.

Watson sped up to a full gravity. As he closed in, the lasers started firing at him from the oncoming ships, but nobody's boats had armor as good as GOTS. Then the screen turned white for a second. He laughed; GOTS vessels were almost impervious to atomic blasts unless it was incredibly close, within two hundred meters.

He shot his EMP where it would detonate in the middle of the ships. It shorted itself out through the coil, and the oncoming ships all went dark. Watson returned to the matrix, and Ramos called home; his job was to protect the Titanic until they were a hundred astronomical units south of the planetary planes on the way to Proxima. Ships would be brought out to tow the pirate vessels back to Mars to be returned to their rightful owners, and their crews held for trial, if the air and heat held out long enough for them to survive. Nobody would worry if they didn't.

Bill called. "Charlie? I saw the flash, is everything all right?"

Charlie laughed. "Of course. That was one of their atomics, not sure where they got it, but it was two kilometers away. Somebody's getting a bonus!"

Bill grinned. The bonus would go to Charlie and his crew, of course. They weren't likely to run into any more pirates, as they were headed southward, away from the orbital planes and away from the belt, where the pirates mostly haunted.

The conversations with the solar team could have been done with tablets or phones, but this trip wasn't haphazard like the Sirius journey had been. There would be a psychologist monitoring each end of each conversation, especially since the solar team was composed of children like Billy. Later in the journey, conversations would become monologues, as it would become less and less like a phone call and more and more like a movie, and the children would be elderly adults before the project was finished.

William sat before the video screen, a small one only half a meter wide, rather than the normal screen, which was a room's actual wall that looked not like a screen, but an

opening into a different room. That's what the small screens looked like, too, which looked kind of weird, a framed opening into elsewhere.

Ralph sat on the other side of the desk with a tablet and stylus, in a chair by the wall. Billy's face came into view, the spitting image of his son Arnold at that age. He smiled, and the child's eyes got wide.

"Daddy! Daddy! They told me you were dead!" and he started crying. He could see, slightly on-camera, someone trying to comfort the boy if he craned his head to the side of the screen.

"No, Billy, I'm not your daddy, I'm your daddy's dad. You look like he did when he was your age."

Billy wore a frown of disbelief on his wet face.

"Really, Billy, look at me closely. Did your daddy have as many wrinkles as me? Was his hair gray?"

The boy seemed to be examining the screen from the other side. He looked a little confused. He looked off-screen and the man with him said something Will couldn't hear.

"Okay," Billy said, "I guess you're not Daddy. You're really his daddy? You look just like him. Except your hair."

"Yes. Everybody has a mommy and a daddy."

"Not me. I don't have a mommy."

"Not now. She died when you were born. But you did have a mommy, you just can't remember her."

Ralph said "Will? Think maybe the boy has enough to think about? You'll have another talk tomorrow."

"Maybe you're right. Billy, they tell me I have to go, so I'll talk to you tomorrow."

"Okay, uh, grand dad? 'Bye."

Will sat back with a dazed expression on his face.

"Are you all right?" Ralph asked.

"He looks just like Arnold! Just like him!"

George now had to explain to a four year old how "tomorrow" to his grandfather was "in a couple of days or so" on Mars.

The next day, Doc reported that Salter was still in a coma. The robot's readouts said he had suffered a stroke and

its medication was being administered intravenously, which also cleared blockage in his arteries that was close to causing a heart attack. He still couldn't tell if Salter would live, or how much real time his life had experienced; how old he was in his own subjective time, how much entropy he had eaten. He didn't know that Bill could supply that information if he needed it, as it was in the company databases.

Billy sat in front of the screen waiting for the data to load. It didn't take this long Sunday when he first met him. Finally his grandfather's image came on the screen, only completely lacking depth. "Hi, Grandpa! I still think you look like Daddy."

Will smiled. It was less than twenty four hours since he had first spoken to Billy, and this conversation took all day because of the lag caused by the speed of light. The Titanic was a long, long way from Mars. The distance was increasing too fast for holograms, so old fashioned two dimensions had to suffice.

"Hi, Billy. They'll teach you about DNA later in school. When you're as old as me, you'll probably look like me."

"The picture looks different than the last time."

"We keep going faster and faster as we travel, son. It gets harder and harder for the computers to process the data the faster we go, so yesterday the picture was a hologram, today it's flat, two dimensional."

Billy didn't get "process the data" but he understood "Harder" and "faster." "Oh," he said.

People don't realize that humans are born smarter than they will ever be again, and more ignorant than they will again ever be. Most of what a four year old experiences is brand new, which is why when they reach their teens and twenties, they don't seem to know the difference between "new" and "different." Change for improvement is a good thing. Change for the sake of change is stupid, a wisdom that youth can't fathom because of youth itself, and was part of the Grommler insanity.

"Jerry said they had it figured wrong, that they thought we'd have holos at least until the security force went back to

Mars. In a few weeks you may have to dictate a letter to me, and your foster parents or the computer may have to read letters I send to you. At least until you learn to read.”

“I can read.” Will smiled; “see Spot run” wasn’t good enough for a conversation, even one with a four year old. He didn’t realize that Billy would be in the second grade in a few months, ship’s time.

“Well, they can help you. How do you like Mars?”

He smiled hugely. “I love it! People smile, nobody smiled back home. They’re nice, there’s other kids to play with, and I can jump *real* high here! Uh, Grandpa, this phone, George said that you talked to me yesterday but it’s two days here, and I couldn’t understand all the words he used. How does it work?”

Will smiled, and said, “Well, I don’t rightly know, myself, son, but the answer’s in a book somewhere.”

The two were happy, and happily continued their conversation. Billy thought it was like talking to his daddy, Will thought it was like talking to his son when his son had been little.

Joe was happy, as well, down in Bill’s dungeon inspecting the generators and engines. When he finished, he climbed the five flights of stairs to the flight deck where everyone lived.

Four flights up he had to sit on a step and rest, completely winded. His leg hadn’t hurt in over a week, but it was very painful now. By the time he reached the top, both of his legs hurt, not just the injured one. The one that had been hurt was excruciating, all up and down the leg. And the readings had indicated that they were still well under a third of an Earth gravity. He trudged to his apartment with a decided limp, took three arpirins, opened a jar of beer, and filled a bong.

Over half of all adults smoked, although a lot of people, like Captain Kelly, could barely stand the smell. Joe spoke to the television and settled down to watch a game of Martian basketball, a game that was much like Earthian basketball, only the baskets were ten meters high rather than ten feet.

Earthian Basketball, along with all organized sports, had been extinct on Earth since after the Yellowstone catastrophe.

Doris was beating Sylvia a hundred two to twenty five. It was far more than a beating. Sylvia's sports teams were the worst in the belt, he thought. He wanted to see Doris play Mars, now *that* would be a game!

Since Doris was so much bigger than Sylvia, you would think that the Dorisians would be better players, but neither asteroid had much gravity at all. It was hard to even walk on either asteroid without a heavy gravity belt or a loaded backpack.

The Doc called Bill and informed him that Salter's condition had improved. He was now stable, but still in a coma. He still couldn't tell if the co-captain could ever resume his duties. Bill was glad he had Joe and Walt doing hardware inspections; that was the worst part of being captain. Well, except for the damned rich people.

These science guys weren't bad, he thought. Nothing like the entitled, spoiled, rich assholes who acted like they thought they were gods or something. Those were normal back when he had normal runs. That was always one reason he used to like cargo runs, rich passengers are mostly rude and demanding. These guys were just normal people and no problem.

Will walked down the hall towards the commons with a huge smile on his face and a song in his heart. He really liked that kid. He was in such a good mood he thought he could probably even put up with Mary without being extremely stoned or drunk.

And, for a change, Mary wasn't in the commons! He sat at the bar and got his pack of Margler's Ganja Extra Strength Tubes out and lit one. The robot rolled over to where he sat and he ordered a beer, which the robot delivered, along with an ashtray. It was one of the new smokeless ones, he saw, as the smoke was pulled into the tray. The smoke would be converted to the energy required to run the noiseless fan that was devoid of moving parts. Charging batteries was a thing of the ancient past. These days, the device itself was its own

“battery” with the device’s case itself supplying power, and only tiny amounts of electricity were needed, as devices had become more and more efficient as time went on, although physics does, of course, have hard limits.

He noticed that this was one of the new, more efficient, expensive ones that didn’t glow or spark, just sucked the smoke and ash in. He had no idea how it worked, though it looked like the smoke and the ash tray were somehow magnetic.

Joe’s arpirins had taken hold and his legs didn’t hurt so much, so he walked down to the commons, and there sat his old friend Will Lathiter! He sat down next to him and said “Will!”

Will’s smile turned to a look of amazement and his eyes got huge. “Joe! What the hell are you doing here?” His grin was back, even bigger. He grabbed Joe’s hand and almost shook it off. They had spoken via video often, but this was the first time he had seen his old friend in person in almost two decades. What a wonderful day! “I wrote you and Harry and Ken right before I left!”

Joe replied “So did I!”

When Will let go of Joe’s hand, he lit the joint back up, hit it, and handed it to Joe, who toked up. Will coughed, and said “When was the last time we got high together, Joe?”

“When was it you had to come to Ceres for work last? What, eighteen years?”

“Yeah, pirates almost got us on the way home, but GOTS got ‘em. How you been, anyway? What are you doing here? You hadn’t retired last time we talked.”

“I have to tell you, Will, work really sucked, thanks to that God damned kid they had in charge. When I heard a boat full of old timers was headed to Centauri, and they needed an electrician, I jumped at it. Wasn’t anything left for me on Ceres, anyway. I hope that damned dumb kid don’t blow up the dome!”

Bill walked in. Good, he thought, somebody found the new ash trays. He barely smelled the ganja. He sat at a table and ordered dinner.

Bob Black walked in and posted a poster on one of the walls with his phone, and sat down next to Will and Joe, who were drinking and smoking and laughing and having a great time. Jerry wasn't.

He was in his office sitting at his desk, mentally composing the report. Mary Watkins had just finished her second conversation with the child, Paul, on Mars, and Jerry was worried, especially after conversing with his Martian counterpart. Mary showed signs of narcissistic personality disorder. More worryingly, there were possible hints of disassociative identity disorder. He hoped that didn't pan out; some of its sufferers could be dangerous to others or themselves. He would have to confer with Ralph. Jerry wondered how she got past the mental health screenings. He wrote up his report and walked down to the commons; he wanted a good stiff drink. Or three.

Mary was in her room worrying, and what was most worrying was that she didn't know what it was she was worried about. She just felt uneasy. She called for a robot to bring lunch to her room.

Three days later, Bob Black sat on the stage in the commons with his guitar. It was a real antique, an ancient Fender Stratocaster, tuning it with a normal electronic tuner like they'd had almost since the Strat had been invented. The computer-generated Muzak that Bob hated played. Bar stools were all occupied and a large fraction of the tables were, as well. More than half of the people there had never heard real music, played on a real musical instrument by a real person before.

Bob's family had been musically inclined for generations. He had been named after another guitar player long ago, his great grandfather Rob Black; both were named "Robert Black" on birth certificates.

Not only had he seemingly inherited his musical talent, which science didn't say was hereditary, but musicians did, but also thousands of books of sheet music and tens of thousands of recordings of music going back centuries. He'd had them all digitized, and the physical books and antique analog media

were locked up in a warehouse on Mars.

His guitar tuned up, he started with an ancient tune called “Thirty Days in the Hole” from one of the antique recordings. He never had found out what “Newcastle Brown” was, a disease, maybe?

The Heliosphere

A week had passed. The ship wasn't even as far away from Mars as Uranus was, but video communications were worthless. It was all text now, like a letter carried to northern California from Southern Mississippi in 1867 with the Pony Express. Half a year had passed on Mars, and it was the first birthday Billy had spent without his daddy. He wished the stupid video would let him talk to his grandpa again, especially today.

But there was a birthday party, with presents, and cake, and candy, and all the other kids and their parents were there. It was a bittersweet day for the now five year old Billy.

Meanwhile, Mort had regained consciousness but was still in really bad shape. It looked like he was going to need both heart and brain surgery. Doc was glad it wasn't ancient times, when physicians had to perform surgery by hand, and often inadvertently killed or crippled their patients. Today, the robots did the surgery. Many medical robots were almost too small to see. He simply supervised.

Charlie called Bill. "Time to turn around and go home. For us, anyway." That gave Bill a crooked grin; Charlie's crew would be going home to Mars, but his may never be able to, and if they ever did return to Mars, it would no longer be "home." It would be unrecognizable. That had been drilled into everyone before they were ever allowed to sign up. Bill had an inkling of this, having seen small changes to society after long runs.

Charlie was a week away from Mars, and when he returned there in another week, a year and a half would have passed on Mars since they left its orbit. Charlie marveled that Bill had known his great great grandfather, who had died when Charlie was an infant, having spent most of his adult life

at a desk on Mars, and spending little time in space after promotion to a safer, better paying, boring job.

Thrust was now close to Mars' gravity and very, very slowly climbing, and nobody had noticed. It would be months back on Mars, with speed continually climbing far, far faster than thrust was increasing. It would take about as long to reach the heliopause as it would from there to halfway to Anglada.

Will was astonished at how fast little Billy was growing, and the faster they went, the faster he grew. Their speed was now incredible. He understood the time shift intellectually, but it was still unbelievably weird. Billy was seven by the time they reached the heliosphere.

But the messages, recorded and sent daily from both teams, came farther and farther apart. That would change when they turned around, and both teams would get messages more quickly. By the time they reached Anglada both teams would be flooded with them, especially the Centauri team, considering all the books and movies and other media that was transmitted along with the personal correspondence from the solar system.

Bob's second concert was coming up. His guitar sat on a stand on the stage as he sat at the bar, sipping a Marley's Natural Wheat, what was often nicknamed "Natty Wheat." Marley's was a newer brewery on Ceres. Martians had invented what Earthians had called "space beer" when it was first developed on Mars centuries earlier, with ingredients mixed differently because of Mars' lower gravity when brewing, and later the recipe was adjusted for the incredibly low gravity on the asteroids.

Bob was barely old enough for the trip, having just turned fifty five a week before takeoff, and he had to talk his way onto the flight. He wouldn't have been accepted if there hadn't been five empty slots. He had also almost missed the spaceplane to the Titanic back on Mars; it was a miracle he was on board. As he sipped his beer, an old woman (they were all old, he thought) sat down next to him.

"Mind if I smoke?" She asked. Bob smiled.

“Not if I get a toke or two!”

She lit a joint, a giant, a real hog’s leg. “I’m Sue. I play Flute. I’ve convinced myself I’m pretty good.”

“Yeah? I’ve convinced myself that I suck!”

She laughed.

He asked “Is that why you’re here?”

“No,” she replied. “I have a PhD in agronomy and a Master’s in hydrology. They need to know if Anglada’s earth can sustain agriculture, and if not, what we can do to make it so. I’ll be working closely with Mark.”

“Mark?”

“Mark Whitney. He’s a biochemist.”

“Oh. Hey, if you want to, when I take a break I’ll let you do a number and the audience can let you know if you’re any good.”

Will had just walked by and overheard, but didn’t say anything. He was embarrassed at his lack of talent on his own guitar that he’d had the robots onboard construct for him. He had been surprised at how good it sounded, lots better than the one he had back on Mars, and the action put his Martian guitar to shame; musical instruments had always been expensive ever since the dawn of music itself in prehistoric Africa. “I need to practice,” he thought, and sat down next to Bob, lit a joint, toked, and passed it to the musician.

“Oh, thanks,” he said, taking the doobie and noticing that the fingertips on Will’s left hand were calloused, like everyone who plays guitar too often. “You play, too? Seems everyone here is a musician!”

Will laughed. “Yeah, but I suck.”

Sue was considering whether to take Bob up on his offer. She had never before had an audience, not even an audience of one. He handed the doobie to her as she considered it.

“So how bad are you?” Bob asked. “You can’t be much worse than a computer!”

Will laughed as Sue passed the joint back down. He hit it, and said, “Well, the only songs I know are...” he coughed. “...computer songs, and I don’t sound anything like the

computer. I suck.”

Bob stood up. “Let’s see, there’s my guitar over there,” he said, pointing to the stage.

“Well, I don’t know...”

“Hey, it isn’t like you didn’t warn us. Come on!”

“Well, okay.” He sat on the stool on the stage with the guitar, and started playing, with the strap hanging in his lap rather than over his shoulder. He was terribly self-conscious; it was the first time he had ever played in front of people.

Bob recognized the tune, and was impressed. It seemed he had left out a lot of the notes in the computer-generated tune, but it sounded better than the computer’s rendition. Leaving out the notes had improved it; they were superfluous and really added nothing to the music. It was typically bland and soulless computer music that Will had added some heart to.

He finished the tune. “I told you I sucked,” he said as he put the guitar back on its stand.

Sue was applauding. Bob said “Dude, that’s a much better version than what the computer plays.”

“You’re just being nice.”

Sue said, “No, really, that was good! Bob’s right, it was better than the computer version. The computer version has a lot more notes but no soul at all. You could make money playing that!”

“You think so?” he said.

“No,” Bob interjected. “A two hundred year old Earthian law says that an ancient corporation owns the tune and you have to pay them. There’s no way you could profit. Copyrights have been perpetual for two hundred fifty years now. Let me teach you some of the old, pre-copyright tunes. Here, here’s one called a Bolero...”

Duane MacPherson was a twenty year old Scotsman in the Earthian Imperial Guard who was stationed in Arizona, and six months after the Titanic left for Alpha Centauri he was ordered to report to launch control immediately, with not even time to kiss his new bride goodbye. They had known each

other since childhood and had only been married for six months.

This was strange, as Earthians were prohibited from flying farther than the moon. Why were they sending him to the moon? Wasn't it that all there was there were scientists and elderly tourists?

A voice broke his reverie. "Private MacPherson, congratulations on this assignment. You're our boots on the ground. We claimed the Centauri system decades ago, and your boots will tread on it."

"Uh, sir? Huh? Uh, what? I'm sorry, sir, but I don't understand."

"You're going to another star system."

"Uh, due respects, sir, but doesn't travel to other stars cause insanity?"

"That's an urban myth you can forget. Now, the spacers have launched..."

The farther the ship went, the more Jerry worried about Mary. She had become sullen and argumentative and given signs that she thought everyone hated her, which wasn't far from the truth. The truth itself usually was very far from her. The lies had been Jerry's first hint.

But he couldn't get her to admit that she had any kind of problem, so her problems just kept getting worse. And there was nothing he could do to help her as long as she didn't seek help.

Then when she passed out in the commons from drinking way too much, he had his chance. He had a robot take her to the infirmary and had Doc immobilize her.

After, that is, treatment for alcohol poisoning. Doc and Jerry had a long talk about their shared patient.

A week later after she had pretended to cooperate, Jerry gave up on her. At least, he thought, until it gets to the point when she wants to be helped. He could, of course, discern that she was only pretending to cooperate.

He worried about her well being, but Doc released her from the infirmary. There was nothing Jerry could do about it,

Doc was adamant.

The heliosphere isn't like some kind of barrier; at least, not a barrier to a space ship or any other solid object. The heliosphere is a giant soap bubble without any soap. It is a bubble the sun forms in the interstellar medium, the matter and radiation between the stars in a galaxy. A star's heliosphere contains its star's system. So of course, nobody noticed when they passed through it.

Nobody but Bill, anyway. His pilot room readings and logs told him. Later he was at the bar, sipping a beer. Joe sat down next to him, but as it had been obvious despite Bill's never having said anything about not liking the smell of ganja smoke, he didn't light a muggle.

"Say, Bill, what's new?"

Bill smiled. "We passed the heliosphere. We're in interstellar space."

"Really? We went through the Kuiper Belt?"

"No, that's in the orbital plane. Centauri is south."

"South?"

"In space, there's no east or west, but inside a heliosphere there's north and south. The star's north is everything in its system's north, and most of its planets share its north. Both of the sun's belts are around its equator."

Joe grinned. "Two belts. The sun must be afraid of its pants falling down. So we don't have to dodge any mountains until we get close to Proxima?"

"Well, there's the Oort cloud. Nothing to worry about."

Going through the Oort cloud is easier than an airplane flying through a vapor cloud on Earth. Sometimes when flying through clouds on Earth there is terrible turbulence. Turbulence when flying through Earthian clouds has sometimes been fatal.

But the Oort cloud is like the belts, in that space has a lot of space everywhere in space, it's so spacious. There's really, really a lot of space in space. You can't imagine how much space there is.

Unlike the belts, the Oort cloud is a spherical shell made

up of very small bodies over fifty million kilometers apart. Fifty million kilometers is a really long way on Earth with its forty thousand kilometer circumference. It's not hard to navigate through spaces that big.

But again, there can still be problems. Comets, for example, some of which can be at least as big as the asteroid Ausonia and can trail an awful lot of ice. Asteroids don't trail ice, although they sometimes trail moons, inhabit the Oort, and sometimes have smaller asteroids hanging around them. Hitting a rock or that ice, let alone the comet or an asteroid itself, would be disastrous. And the comets and everything else were all moving, and very fast, although nowhere near as fast as the Titanic.

Bill's alarm rang on his phone. He would have to go to the pilot room and at least supervise, and may need the passengers to strap in. He excused himself and went to the pilot room.

"Oh, shit!" he exclaimed when he got there and saw the readings. This was bad. The angles of motion of the two bodies, the ship and the outer space iceberg, were such that the computers hadn't detected it until it was almost too late. It still might be too late. He grabbed his phone, which of course was also the ship's microphone when talking to other ships, or as a phone and public address microphone inside the ship.

"Attention passengers, please strap down immediately. There's a slight problem and gravity is going to get bad. Please hurry or it could really, really hurt." As he spoke he was working the controls and fastening his own belt. "Sorry, folks, I know you hate this." He had increased thrust to over a full gravity while the ship turned, thrust growing by the second.

In all the (altered) time Bill had spent in space in his career, there had only been a handful of times he'd had to dodge rocks or giant ice cubes. Pirates, yes, lots and lots of pirates, but almost no asteroids or comets. But he'd never gone as far or as fast.

They were well over a full gravity for a full minute. The asterites were miserable, and some were calling Doc, who as an asterite himself was equally miserable. Three who had either

ignored the request or were slow in strapping in had broken bones. One of them also had a ruptured spleen, she was in really bad shape. Harold called a medic to take him to the infirmary to supervise their robotic treatment, but it took more than a minute for it to get there, so he walked after it was possible.

Bill was sweating at the controls as he got past the comet. He was even more relieved than those from Sylvia, all of whom strapped down quickly. Or Sylvia, who was one of those who had called Doc complaining she couldn't breathe. All were thankful the gravity was back down. Bill was grateful the stupid computers hadn't managed to kill them all.

Yet. Hundreds of years after the Oort cloud had been discovered, they still didn't know how far the other side was. Maybe there wasn't an "other side." Maybe all of interstellar space is strewn with rocks and icebergs, he thought. Too bad he didn't have access to the Sirius trip logs. And maybe that's what had happened to the Earthian robot ship.

At the same time this was happening, it was years later on Earth, an entire planet ruled by a despotic autocrat who held the office of President by right of birth. Its government had psychologists in its service, all press on Earth was run by the government, and had convinced the populace that its four billion were too many people.

With an overpopulation problem, people were hesitant to complain about all the political crimes that had death sentences, or the lack of any government-funded health care. Not the least bit social, its government called itself "socialism" despite being a cross between Soviet style communism and 1930s Italian fascism. It doesn't matter if government controls business or business controls government, the result has always been dictatorship.

Earthian history had been castrated under the dictatorship. Files were deleted and physical books and other paper records were burned, despite the ban on combustion. Religion was illegal. Most said everything was illegal, and indeed, one could be arrested for doing anything that wasn't expressly permitted by law. No one on Earth had a holy text

from any religion. No one on Earth knew that the Jews had been enslaved thousands of years earlier by the Egyptians, or that the Africans were enslaved hundreds of years earlier by the North American Europeans, or that wars against dictatorships were fought and won by those who believed in democracy. Much of Earth's history was gone forever, what was left that wasn't lies was with historians in space.

The population problem the government always complained about was about to solve itself. A deadly strain of a very common and very virulent but usually mostly harmless virus was running rampant. It had first shown itself over two centuries earlier when everyone aboard a ship studying Venus from orbit had all died from it, and the ship itself was towed to the sun for disposal. Everyone in the solar system thought it had been eradicated.

Billy was glad he had left that horrible place, and wondered if he would ever meet Grandpa, who was still years and years in the past. At least, that's how George explained it. He didn't understand it and doubted that George did, either. Reality is that everyone is always in the present all the time, no matter when, where, or how fast. It's always now, regardless of the speed of entropy.

They say "time flies like an arrow" but they don't know what they're talking about. Time warps and twists with speed and gravity just like space does. Two years after the ship left Mars, they had passed the heliosphere, were well inside the Oort cloud, and it was Billy's thirteenth birthday.

Your birthday is either a terrible day to get in trouble, or the best time possible, depending on your outlook. George's nephew Paul was Mary Watkins' Martian counterpart. Assigning Paul to the Solarian group was a bigger mistake than assigning him to Mary, or Mary to the project at all.

Mary had suggested a book his teacher hadn't read, and the book got him on the road to muggles. The anti-cannabis advertising hadn't helped keep adolescents off of ganja, despite the harm to a developing brain. He and Billy, who now insisted on being called "Bill," had been caught smoking on Billy's thirteenth birthday. It was Billy's first experience with

pot.

Billy barely remembered his birth father, and thought of Grandpa as such. He hadn't heard from Will for several years, the time it took the signal to travel plus the time dilation.

Luckily, psychology was king in this study, and that science, born hundreds of years earlier in the twentieth century, was now fully matured, or at least as mature as any other science. There is always more that isn't known than what is known in any science, and always will be.

George explained to Billy how ganja worked, how it could damage his adulthood, and how it could actually get him thrown out of the program and he would never see his grandpa again, and explained it in words that would stick. He might not even imbibe when he was grown, even though it was virtually harmless to an adult.

Will, Bob, and Sue had been performing together since the week after they had all met for the first time in the commons. Afterwards they had performed every Saturday night; or at least, what would have been a Saturday night if time made any sense.

It made sense as long as you didn't think about it too much, or notice the date stamp on a message from Mars.

Bob had written a new song. None of them had ever heard of a human writing a song, it was as strange a thought as a man digging a ditch with his fingers. But the crew on the ship applauded fiercely when they had performed it on a "Saturday night." Bob sent a copy of a holographic recording of it, along with the sheet music, to the Martian copyright authorities, who would receive the message years in the future, like all such messages to Mars and the belt.

"You know," Bob said when they were at practice, "we're a band now. We ought to give it a name."

"Why?" Will asked. "We're the only musicians on the ship. 'The band' should be enough, at least until we get back to Mars."

"Well," Sue said, "We haven't played a note in half an hour. If all we're going to do is gab, let's do it in the commons

over a beer.”

At the commons, Mary was at the bar. “Let’s sit at a table,” Will said. Nobody objected. No one much cared for the selfish, greedy, thoughtless Mary, who still refused to let the psychologists help her.

That may be the worst part of some mental illnesses. If you have arthritis you’ll beg for something, anything, to relieve you of the torture. The same with cancers, which hurt far worse but are thankfully at least fatal, unlike arthritis. But many mental illnesses have as part of their symptoms an inability of the ill to believe that there’s anything wrong with them at all.

Others like Mary, or those suffering from diseases like acute clinical depression or bipolar disorder, may think they deserve to suffer. Like others like her, despite her outward behavior, inside she was very fragile. She feared Ralph and Jerry might destroy her, that she would disappear and another her would take her place.

There had been an urban legend an Earthian had told her about “body snatchers” that made it worse. Legend had it that before the world-wide government, the Australians had developed a device that would replace one brain’s mind with a completely different mind from a quadriplegic. The crippled body was then cremated and its owner, in its new body, pretended to be the person whose body they had stolen.

Sometimes Ralph wished he’d studied astrophysics or paleontology or geology or anything else, especially when he was forced to treat a patient who refused treatment, especially those who believed stupid bunk like the “body snatchers” nonsense. And especially one who had heard that stupid story, which he was sure Mary had.

Doc released Mort from the infirmary, but had forbidden him go back to work. Salter fought it, but was no match for two trained psychologists with doctorates in that field.

After almost three years’ journey, Will’s four year old grandson was fifteen years old, already graduated from high school and working on a bachelor’s degree in electrical

engineering. He planned to go on for a Master's after graduation. Will was immensely proud when he found out years later. In college at fifteen! And he was only four. Or five. Or six? Except, he wasn't. This relativity stuff was crazy, he thought.

It seemed to him that Billy was more like him than Arnold, who, if it had been admitted, had been a criminal who had come to a bad end. At least, that's how the Earthians saw it. It wasn't how Will saw it. Wasn't it supposed to have been a freak accident?

A few days later, Doc's phone chirped again. It was the computer referencing Captain Salter, who had just gotten out of bed in a bad mood, with high blood pressure, for no discernible reason for the mood or the pressure. He had only released him from the infirmary the previous "afternoon." Harold walked down to his flat. Salter was still very ill, all this time later. The elderly very often heal much more slowly than youth, and he was even older than Kelly.

Salter had just started drinking his coffee as a knock came at his door, which was the sound he had programmed the doorbell to respond with. "Let 'em in," he said to the ship itself. The door opened and Doc entered.

"Are you all right?" Harold asked.

"Huh? Sure, Doc, why?"

Harold looked at his phone again. Mort's blood pressure was even higher. "The computer says you're not feeling well, maybe you should drop by my office for an exam?"

"No thanks, Doc, I feel fine. Want a cup of coffee?"

"No thanks. You sure you don't want me to look you over?"

"No, I'm fine. Sure you don't want a cup?"

"No, thanks, I'll see you."

Because of the Martian HIPPO law, which stood for "Health In Patient Permission Only" that guaranteed the rights of patients to be left alone, there was nothing he could legally do.

Mary had turned out to be a huge pain to everyone on the ship, and since no science is completely mature, the

psychologists were no help. Except, of course, whenever anyone threatened to throw her out of the airlock and had to be reminded that jokes like that weren't funny on an interstellar trip.

A few months later, Doc was days away from letting Morton resume his duties when Salter, an atheist, had another stroke. This time he was in the commons, arguing with the pseudo-religious Mary about religion, and Doc was right there at the next table that time, with his tool bag. As usual, Harold was prepared, but he couldn't get a pulse or make his heart start again. He and his vast knowledge, extensive expertise, and the best, most advanced tools that existed might as well have been a cave man with a rock.

Everyone on the ship was invited to his funeral, of course, but the only ones who showed up were Bill, Harold, Jerry, and Ralph. Jerry wasn't surprised that Mary wasn't there, his diagnosis of narcissistic personality disorder had been borne out, although disassociative identity disorder was thankfully off the table. A person with a normal personality would have felt like a murderer if someone collapsed and died during an argument, or even as soon after as the next day, even though it really wouldn't be their fault.

By now, at this speed, messages from Mars were few and far between. They were nearing the point where they would turn around, going the fastest they would on the trip, and time going the slowest.

The time on the clocks and phones on the ship were all fed from the ship's clock. Centuries earlier when boots first stood on Mars it was believed that one couldn't get more precise time than on an atomic clock, but three hundred years before that they thought that going faster than the speed of sound was impossible, despite the evidence of a sonic boom from a whip's tip cracking sound's speed limit. The ship's clock was far more accurate than an atomic clock, and said they had been gone from Mars for three years, seven months, six days, fourteen hours, seven minutes, and twelve seconds.

It wouldn't have mattered if the result was carried to five trillion decimal places. Whatever the ship's clock said,

regardless of its accuracy, was nonsense. Years had passed on Mars. The ship's clocks only measured entropy inside the ship and was meaningless anywhere else in the universe.

Braking Maneuver

They had been traveling for over four years and were past the halfway point to the Centauri system. The thrust was nearing a full gravity. Will's grandson, who had been four at takeoff, was now a twenty two year old newly minted electrical engineer, who had proven himself to be exceedingly intelligent, skipping grades in high school and going through college at amazing speed. The ink on his Master's degree was still wet and his engineering job in the dome was brand new. His foster parents were now seen as older friends. He had been married since his graduation with a Bachelor's degree, having met his wife as an undergrad. She was also an engineer, and had just given birth to little William the third. He immediately wrote Will of the news.

And when Will read the correspondence after it arrived years later, he saw that his sons hadn't been as worthless as he sometimes thought; they had left Billy a fortune that was a secret until he was twenty one.

Will's four year old grandson was all grown up, a rich dad, and Will was now a great grandfather. Billy wished he could meet his grandpa and tell him in person, as now messages were years apart.

Billy's friend and classmate Paul had been ejected from the study at age twenty, when he had been caught stealing supplies. George never heard whatever happened to him, although he certainly spent some time in Mars' orbiting prison; George and his brother had an unresolvable difference of opinion. Even for a psychologist, a family could be torn apart. Intelligence and education were no match for stubbornness. Very little can defeat stubbornness.

Aside from the troubles Billy had before Paul was

expelled from the program, his had been a relatively normal life for a Martian, except for his exceptional intelligence, and finding God. Most spacers didn't believe in Him, and the rest mostly ignored Him. With all the Domes on Mars, there was but a single, small church with a tiny congregation that had members of the Jewish, Muslim, and Christian faiths. There was a tiny Buddhist temple on Vesta where the Hindus also worshiped. But God doesn't have a place in this story, except to smile on the young orphan.

Unlike his grandpa, Billy didn't smoke, although he enjoyed an occasional beer.

On his native planet, a disease had killed three billion people. A billion people was that planet's small remnant after the disease had killed three quarters of its population. It had again devolved into the same chaos that had happened after the supervolcano. No longer was there a world-wide government; the planet had nearly gone back to the hunter-gatherer stage, except for the Amish, who blamed God's wrath on the sinful for the catastrophe. They had been predicting it longer than anyone knew. They were about the only people on the planet who didn't worship money.

As Earth had no medical systems, the people they considered their enemies, the spacers, had saved what was left of their civilization with vaccines, the same vaccines the Earthians had claimed were the source of the disease. The vaccines that they sneered at that were developed to protect the spacers from any of those stupid Earthians who might escape that gravity-bound hell hole.

Amazingly, the Amish on the North American continent were relatively unscathed by the pandemic, despite their homes now being mostly basement homes, with only a few above ground buildings miraculously still standing. Having almost completely kept to themselves for a very long time protected them from the disease. There were at least a hundred thousand Amish left. Perhaps they had gotten it right all along.

Meanwhile, about 40,000 AU away onboard the Titanic, give or take a few million kilometers, his grandpa was smoking

a bong with Bob and Sylvia. They would be on Anglada and maybe on their way back before they heard the news of the pandemic, and the second collapse of Earth's modern civilization.

They were at a practice session, and had been there an hour without playing a note. Ralph had set up a ganja farm in an empty storeroom, as not enough ganja or popcorn had been sent, so popcorn was growing in the same storeroom. Popcorn hadn't been popular in the solar system for centuries, but was very popular at the Titanic's bar, especially when there were holos, or even antique movies with real human beings and now-extinct animals in the auditorium.

Lawrence McMahan, who had mostly stayed to himself in his apartment, reading and watching videos, doubled over in severe pain. He was moaning and had hardly had time to react to the invisible javelin that an invisible somebody had thrust into his side. God, but it hurt bad! He wished he'd seen the doctor a couple of days earlier when it had just begun to hurt.

The Doc came rushing in and put something on his forehead. His side still hurt terribly, but somehow the pain was meaningless and he didn't mind it. A medic came in, and he laid down on it.

The robot's readings told Doc that the man's appendix had burst. Odd that he hadn't visited, the pain of appendicitis usually got a patient to him quickly. If Larry had seen him a few days earlier, he wouldn't have needed surgery.

This was actually pretty abnormally normal for Harold and his shipload of geriatric geezers. He was amazed that only Captain Salter had died so far, too humble to acknowledge his own prowess. Statistics said there should be close to half a dozen fatalities by now.

Tomorrow Joe and Walt would each have two turns in the dungeon, as they had each begun to call it, without either knowing that's what anyone else called it. Joe didn't mind going down, and actually liked the work, but he hated coming back up and was glad when he arrived upstairs.

The book required inspections, and as good technicians,

Walt, making the morning and evening inspections, and Joe, who would be headed downstairs tomorrow before braking, always went by the book.

Well, except when the book was wrong. That's one thing most people learn by the time they retire, but seldom do early enough in life to do them much good. In somewhere like a factory or a generator, by the time you understand something it changes, and the book is wrong all of a sudden. Walt thought about the damned kid who had been his boss on Ceres, and thought again that he hoped his youthful ignorance didn't kill everybody in the dome.

And sometimes the book is wrong as soon as it's published, because computers write them and people edit them and both of them are very prone to error, especially the people watching the computers and editing their work.

Joe was in the commons smoking a joint with Ralph the day before braking, not realizing that the two psychologists were always on duty, like Doc and Bill, and like Mort had been before his stroke.

"Yeah, Ralph, I love my job. Except those damned stairs."

Ralph grinned. "Well, look at it this way, if you ever decide to go to Earth you won't need an exo!"

Joe laughed. "I doubt I'll ever have a reason to want to go to that shithole! But I love the equipment, and man, this ship has everything. It's twice as good as my generator on Ceres. Hell, half the time I couldn't get parts there, and I could build another generator with all the spare parts we brought! I love going down there, hate coming back. I'll be down there three times as long tomorrow."

"Yeah? What's so special about tomorrow?"

"Braking maneuver."

"What's that? What gets broken?"

"Nothing, I hope. I'll be down there making sure nothing breaks while Bill ends the thrust and turns the ship around. After tomorrow we'll be decelerating at the same thrust we accelerated with. Bill says it's no problem."

"Oh, brake." Ralph knew how minds worked, but not

how physics works, except the small bit of knowledge undergraduate general study courses provide. You can only know what you're taught or what you can learn from books or find out for yourself.

"Where's that robot?" he said, right before a robot rolled up with a beer.

"Is he going to make an announcement?" Ralph asked. He thought it might worry some folks if they went weightless suddenly.

"I don't know, maybe, I don't know what the book says." He glanced at his phone. "Oh, hell, I'm supposed to see Jerry in five minutes. See you later."

"See you."

Before Ralph's beer was finished, Bill came in and sat down where Joe had been sitting. The ash trays were apparently working well.

Bill had told everyone "just Bill" but Ralph, a former GOTS navy man who had never left Ceres, insisted on rank, but at least he gave him the nickname for captain. "Say, Cap," Ralph said. Bill smiled.

"Say, Ralph. Anybody go nuts yet?"

"Just me. Say, how do we actually stop when we get there? Just thought of that. Will anybody notice? Will you be giving an announcement before you hit the brakes? Might stir some folks up if gravity changes, they'll worry."

Bill hadn't planned on saying anything, thinking he could do it without anybody knowing before they were weightless. The book didn't say anything about warning passengers, but Ralph was right.

Late the next "morning" near lunchtime Joe descended to inspect the love of his life, and Bill went into the pilot room.

"That damned Ralph can read minds," Bill said to no one in particular, since he was there by himself.

He picked up his phone. "Your attention, please, we will be turning around to slow the ship down as we approach Centauri. This will require a brief period of weightlessness, but it is scheduled and temporary and is no cause for concern. Thank you for your understanding."

Mary was in the commons at the bar and hurriedly lit a joint. Weightlessness is like music, in that it's almost always enjoyable but more so when you're high. She took a toke and held it as Will came in, also with a lit doobie, as the thrust lowered.

Will tripped and fell. Mary started laughing. Will laughed along as he got back up, and floated towards the ceiling. Mary laughed even louder. Jerry sat there grinning, sipping a beer and trying to keep it from floating out of the bottle. Sylvia was there, also stoned and also laughing loudly. There was a bit of a mess for the robots to clean up later.

Will, laying on the ceiling, said "Man, I'm high!" Everyone laughed uproariously, especially Jerry, who was a lover of puns.

Joe was downstairs with his beloved generators and engines. After he had done the inspection, he lit a joint, sat on a step, and waited for the weight to go somewhere else. He took another hit. As he became lighter as the thrust lowered, he thought "so that's where a black hole gets its mass!" He thought it was both hilarious and profound, no matter how silly the outrageous idea was.

Bill was doing the real work, making sure the crazy computers didn't blow up the ship or anything. The basic architecture of a computer hadn't changed in hundreds of years, ever since they were invented in the twentieth century, but no one could any longer understand their programming. Computers had been programming themselves since not long after they were invented when they had developed the "artificial intelligence" that made the mindless computers fool people into thinking they had minds; or rather, their programmers did. Luckily, he thought, they usually regained their sanity after they went insane and had to be restarted.

This time, none of the four computers went crazy. "This calls for a beer," he decided out loud to himself. He walked down to the commons and sat several stools down from Will, who had that awful cannabis smell surrounding him; rather than the smokeless ashtrays, he was using the remains of his lunch as an ash tray. Bill ordered a beer, and the robot wheeled

it over to him. As he took the first sip, his phone alerted. It was Joe.

“Sorry to bother you, man, but the book says I gotta.”

“What is it?”

“Engine forty two has some strange readings. Nothing you can do about it from up there, but the book says to alert you.”

“Read ‘em to me.”

He did. Bill replied “The book’s right, I’ve run across this before, a long time ago. It’s rare now, with the improvements in technology, but it still happens. Shut it down, as well as forty one and forty three. If it’s like I saw back in the day we could lose all the engines on this ship.”

“Wow. They didn’t say anything about that in school.”

“It was before your time. I’ve forgotten what the root cause was, but with twenty four ships strung together with three hundred engines each, we can afford to lose three engines.” He didn’t think the cascading failures he had seen in the past could go from ship to ship, but since they were interconnected, he wasn’t going to take the chance. “Oh, and keep the repair robots away. They’ll melt.”

“Wow,” said Joe, who then disconnected the three engines, finished up, and went for what he was now calling his daily calisthenics routine, trudging up the stairs. This called for a joint and a beer.

A week later, Will was stoned, and happy. Mary had gone back to her apartment. He ordered a third beer as Joe came in and sat down. Ralph was at a table pretending to read a book while he kept an eye on his charges.

A few people in the commons seemed to be slightly inebriated. This always worried Ralph. Mary had made it through the screenings, had a few others made it through, too?

The common area was filling up nicely. Bill didn’t seem to mind the smoke, although it seemed like almost everyone in there was smoking; the ash trays caught neither all the smoke nor all the ashes, especially if someone smoking was also drinking. He was actually starting to get used to the smell, but hadn’t yet noticed that he was. He sat at a table and ordered

lunch. He thought back to when he was first hired over two centuries earlier, static time, as he ordered a pork chop, mashed potatoes, and green beans.

Back then, pork was so expensive that only the very richest could afford to eat it, and it made the more liberal of the upper classes feel guilty when they ate it. He remembered his ex-wife's friend, the CEO's daughter who had married his best friend, also a ship's captain. She was a liberal who felt guilty eating pork. Of course, all three had been dead for over a hundred years. He missed John, whom he had known since high school. Bill, the nerd, was often defended from bullies when they were in high school by his best friend. He still missed him, all these years later.

These days, the only farming allowed on the Earth was plant based and only using natural chemicals, and all underground except for Amish farms, which the Earthian authorities had always overlooked. No one had complained. Earth had become completely vegetarian except for the Amish and Earth's extremely rich, the richest on the planet, who had until the embargo bought meat and other forbidden items from the spacers. The Amish no longer would have anything to do with them. Normal Earthians didn't even have any dairy, and Mars had entire domes devoted to livestock, and others as wildlife refuges for species that man had caused to go extinct on Earth, like lions and elephants and horses. Earth's last zoo had closed over a century earlier, all of its animals exported to Mars as dozens of zoos had earlier.

Today, a spacer could eat anything he or she wanted, and all were what an Earthian would call fat; it made walking easier in low gravity, while most Earthians were almost always hungry. You could see ribs if they were shirtless. Bill felt sorry for them as he cut up his pork chop.

Halfway from nowhere

Doctor Guisewild was awakened by his phone. The ship's computer was screaming through it, "*emergency, room A-31...emergency, room A-31...emergency, room A-31...emer...*"

He hit the stop button, jumped out of bed, and ran down the hall in his underwear, carrying his tool bag. A-31 would be Mary's room. She had spoken to him first thing that morning, and he suggested she see Jerry. He feared Jerry or Ralph may have made a big mistake, but he didn't know what.

General practitioner physicians had been trained as well in psychology as they had been trained in gerontology, treating the brain and nervous system as any other of the body's organs and related systems.

She had finally seen Ralph the first thing that morning. She had avoided him ever since she had overdosed on whiskey. For the first time in her life she felt lonely. All her life she had been the greediest, most selfish person ever, and when her victims would no longer associate with her, she'd moved on to a different crowd.

Now there were no more crowds to move to, no more asteroids, and no more planets, except the one they were traveling to, and there were no people there, nobody new to defraud. There were no longer millions of people on dozens of asteroids, now there were only a few dozen people in total. Hers was the most successful of all the methods of stealing. Her victims didn't even know they were being stolen from. Usually, anyway. But her personality fit her evil soul, and people usually grew tired of it. Sometimes quickly, like with Will, but usually after quite a long time.

When she told Doc this, or rather a dishonest version of it, he referred her to Jerry, as this was obviously out of his

field. Of course, she couldn't tell Jerry that. She actually didn't understand it that way, but telling anyone how she actually felt really went against her grain, and she had only voiced half of it to Doc.

Jerry knew what her real problem was, but she wasn't at a point where he could do much yet, because she didn't really know yet and he had to lead her to the knowledge safely and gracefully, so when he could see that she was becoming uneasy and would probably bolt, he just suggested that she see Doctor Guisewild for a drug he would write down for her to take to him, as he wasn't licensed as a drug dispensary.

Rather than seeing Doctor Guisewild, who had told her to see Jerry, she sat in her room with a bottle of high octane whiskey. She didn't plan on going to bed that night. This was it. She would wait until "night" when everyone was asleep, and then...

Doc rushed into her room to see her hanging from a bedpost by a blouse. She had taken off her watch, which was how emergency services were normally alerted when someone in a dome had a medical emergency, but on a GOTS ship, the ship itself listened to every breath and every heartbeat of every person onboard. Nobody really needed a watch on a GOTS vessel.

He put oxygen infusers on her head and chest as a medic rolled in; she was unconscious from asphyxiation, but her heart had not stopped. She was now stable, and the medic rolled to the infirmary with Doc trailing. He wondered if she would have any brain damage, and if so, how much? He would have to talk to Ralph and Jerry after she became conscious, and double check the readings on the instruments, once in the infirmary.

Nobody but Mary knew yet that her "suicide" wasn't really an attempt to stop living, it seemed. But it was a fake. Her sick, evil, scheming mind had deduced that perhaps what she needed was sympathy. Poor poor pitiful me. She had taken off her watch, to make them think that she thought that its removal would stop it from triggering emergency services. She hadn't realized how much danger she had placed herself in.

Trying to pretend to hang herself, she had hung herself.

Doc went back home and back to bed.

Bill woke up at his normal time, if time on a ship like this could be considered “normal,” as the coffee made itself. The robot put it on the kitchen table as he got dressed and his breakfast prepared itself.

“Normal,” of course, is changeable and may not even really exist. In 1920, horses were normal and automobiles were strange expensive toys that rich men owned. In 2020, automobiles were normal and anyone on a horse was a rich person and their expensive living toy. In both years, wearing a mask was normal, as there were world-wide pandemics in both years, but almost never else were masks normal.

Bacon, eggs, and toast was still a normal breakfast hundreds of years after the invention of the telegraph, and since before indoor plumbing was normal. Bill had oatmeal.

He finished his breakfast, took a shower, got dressed, and went to the pilot room. Of course, the first thing to be done was to check all of the computer readouts. All were normal. Then he checked the computer logs, and was startled but not surprised to see the attempted suicide. Of course, as captain, he would have to visit that ornery woman in the infirmary. Mort wouldn't have gone at all, he thought. He walked to the infirmary, planning to start inspection there.

“Say, Bill,” Jerry said.

“Hi, Jerry, Ralph, Doc. How's she doin'?”

Harold was still groggy, having had his sleep disturbed by Mary's “suicide.” He sipped his coffee and said “Don't know yet. She might not even wake up, but there's brain activity. She needs to be awake for further tests. I'll keep you and these guys posted.”

“Thanks, Doc. I'll see you guys, I have to inspect everything.”

As he left, Jerry said “It's a fake.”

“Huh?” said Doc. “She's really in a real coma from lack of oxygen. She might suffer brain damage or even die!”

Ralph's face was a cross between a grin and a smile. “Jerry's not saying she's okay, he's saying that she was trying

to fake suicide and screwed it up and almost killed herself for real. Sociopaths don't suicide. Here, when she wakes up, add this to her IV." He did something to his phone, and Harold looked at his.

"I don't get it, how will this help?"

"You can read a lot faster than I can talk, and there's a four week course on this. It's in the library."

By the time Bill's inspection rounds came to the entertainment center, the last place to inspect, there were a couple dozen people at tables eating breakfast. No one was at the bar. After inspection Bill sat at the bar and ordered coffee from the robot and made the table to display the book he had discovered in the ship computer's library.

The holographic book looked like a real antique book made from paper. It was a very, very old novel, titled *Foundation*, written by a biochemist about a future "psychohistory." He read about a page, and looked for another book; the archaic language was barely readable. He picked another oldie, but this one was only a century old. And, of course, an alarm on his phone went off.

It never fails.

He hurriedly looked at his phone; there was a fire in Mary's room! How could that happen? It had been well over a century since cleaning robots caught fire.

Shit. He rushed down there, despite the fact that the room would be locked with the light above the door flashing red. The lights weren't noticeable unless lit.

It's easy to put out a fire in a room in outer space, as long as no one is inside of it. You just vent the inside air outside into the vacuum. The ship did this automatically in an unoccupied room, sealing it from the rest of the ship before venting. The rule was simple: in case of fire, get the hell out of there as fast as you can. The faster you get out, the sooner the air can be removed and the fewer of your belongings will be burned up.

By the time he got there, the emergency was over, with the smoke and flame blown out. He inspected, like the book said, but he was not a trained fire inspector and couldn't find

the cause. He had his engineers look at it, and they couldn't tell how it started, either.

The next "Saturday night" was night club night, as had been usual. The trio sat up their instruments as the crowd, which tonight would be nearly everyone on board, trickled in.

"Nice crowd," Bob said.

"I'm nervous," said Sue.

"Normal for a big crowd like this. You'll be okay unless you're too scared to play. Will, do you have that part down pat yet?"

"Good enough, I guess. That recording was really hard to learn. But you know, we need a drummer."

Sue laughed. "Do you have any idea how far away the nearest drummer is?"

Bob replied "The last drummer died a hundred seventy five years ago, and his craft died with him."

"We could use a comput..."

"Hell, NO!" Bob and Sue interrupted in unison.

"Well, maybe Joe or somebody would want to learn."

"How?" Bob asked. "Who's going to teach him? Where would he get drums?"

"How did you learn to play guitar?"

"My grandpa taught me."

"Nobody taught me."

"Me, either," Sue added. "He'll have to learn by himself like I did, and like Will did. We're practicing a lost art!"

Will replied "I'll see if Joe wants to learn, he always did like music."

"I guess it's curtains for us," Bob interjected.

"Huh?"

"Time to play. Will, your part comes first." The stage lights lit as he stepped up to the front edge of the stage, controlled by a computer, of course. "Ladies and gentlemen, thank you for coming tonight," Bob's amplified voice announced. There was no visible microphone as had been used at the birth of amplified sound, but tiny computer-controlled mics in the ceiling and floor that were focused on the source of the sound to be amplified. In this case it was Bob's mouth.

“May I please introduce, William Lathiter!”

The crowd applauded softly and Will played, then Bob joined in, followed by Sue’s flute. Bob started singing. “There’s a lady who’s sure all that glitters is gold, and she’s buying a stairway...”

Harold’s phone went off. “Never fails,” he said under his breath, and got up and walked to the infirmary.

Mary had woken up groggily, and didn’t remember going to bed, or the faked suicide that had almost killed her. She didn’t yet realize that she was in the hospital, or that she was paralyzed.

Harold walked in. “How you feeling?”

Just then was when she realized that she couldn’t move. “Doc! I can’t move! What happened? Am I in the hospital?”

“Yes. You can’t move?”

“No! I...”

“Here,” the doctor said, and pulled out a hypodermic patch. He placed it on her arm for a second. “Now?”

“No.”

He had, of course, been coordinating with Ralph and Jerry. She was terrified of them, but had no feelings about the physician at all. They had told him to get her used to the hypo, which hadn’t been a needle since antiquity, but a small device called a “patch.”

Bill walked in, somewhat annoyed as Harold had been, having been alerted when Doc had. He hadn’t had the musical performance interrupted, but rather his work in the pilot room. He had halfway finished an onerous task when the rule book said he had to greet an awakening passenger in the infirmary. He would have to start it all over when he got back.

Bill, like Harold, was a professional who didn’t let his annoyance show. “Hello, Mary, how are you feeling? Doc says...”

Doc interrupted him. “She seems to have had some sort of accident and can’t move.”

Bill’s Asperger’s got in the way for a second, but he powered his way through it. “Oh?”

“Yes, she’s become paralyzed. Possibly a reaction to the

whiskey she had last night,” he lied, “but she could have fallen, although the instruments didn’t say so. They can’t catch everything.”

Bill could tell he was lying and wondered if Mary could, too. But he knew the ship and she didn’t, and she was partly anesthetized and not all the way awake. “Well, good luck. I have to go redo that... uh, I have some chores. Bye.” He went back in the pilot room.

Meanwhile, the band played on. They finished the show, and as people were leaving and the robots were cleaning up they sat at a table as a robot brought drinks. Joe was at the bar, and moved over to their table. “Great show, guys. I really loved that first song, never heard anything like it. Seems like it was missing something, though.”

All three started laughing. Joe looked puzzled.

“Drums!” Will said.

“Huh?”

“Drums. Another instrument, percussion. It keeps time.”

“Doesn’t the computer do that?”

Bob laughed. “Drums were the second musical instrument, after the human voice, and the first instrument ever invented, probably more than ten thousand years ago. Computers have only been around for a few hundred. Want to join the band?”

“Huh?”

“We need a drummer, even if the last one hadn’t died over a century ago, and there still aren’t any outside the solar system, or even inside it.”

“I don’t know how to play drums.”

Will said “Nobody does. I didn’t know how to play guitar until I taught myself.”

“Can’t teach an old dog new tricks!”

“Bullshit. Unless you have untreated Alzheimer’s, and they wouldn’t have accepted you for the expedition if you had. Give it a try?”

“Well... where would I get drums?”

A month later he was in a store room the robots had set

up, with a very large part of the wall appearing to be a different room and connected to the ship's impressive sound system, the third dimension added to the ancient video recordings by a computer. Turning photographs into holograms had been possible for two centuries, although they didn't quite look real somehow.

He was beating on a set of drums, a large, impressive set copied identically from the twentieth century Ludwigs. Bob had chosen them, based on his antique music history collection. The best drummers had used them in the twentieth century, his documents told him. Plus, he liked the weird name.

They sounded terrible. At least until he and Bob had gotten them in tune, the robots had been abysmally incompetent at tuning drums. Bob and Joe had done it by ear, matching the recorded sound from the antique recordings. One would have thought the computers in the robots could match the frequencies, but computers can't think and drums are quite a bit harder to tune than a guitar.

But Joe was getting better. It still didn't sound very good, despite the drums being in tune.

Mary had regained much of her strength, and was getting around in a wheelchair. Although she didn't remember the "attempted suicide" or that she was looking for sympathy, she actually got some. A wheelchair will do that for you, although crippling yourself is a terrible way to get sympathy. But Mary suffered from sociopathy, not Munchausen syndrome.

Doc had administered the drug Jerry and Ralph both recommended. The book explained that it eventually built up empathy where there had formerly been little or none, and included the scientific studies. Harold found them fascinating.

It was originally an offshoot of a drug that was invented to cure lack of libido in women who suffered from it, which had been the cause of many divorces before the drug was developed.

It was worse afterwards, and before the drug was out of trials the trials were quickly stopped. It not only gave a woman

a libido, the libido was completely out of control, and worse, the drug was physically addictive. Withdrawal was always fatal, not only for the addict but for anyone around when they were withdrawing. Captain Kelly's ex-wife, a psychologist, had been the one to find a workable treatment, which involved, among other things, going to Mars from their native Earth. "Droppers," as they were called, didn't like low gravity.

It led to the drug to treat the lack of empathy, which is the root cause of sociopathy, affecting the amygdala differently than the older formula. Like sufferers of many other mental illnesses, sociopaths fear treatment. Unlike its precursor drug, it wasn't addictive, and in fact the contrary; a side effect was temporary but prolonged paralysis.

She rolled into the commons for a beer. Still too weak to lift a glass, she would have the robot bring a straw. The show would start soon, and this was the first time she had attended in weeks.

The band was at a table by the stage. Antique tunes from the birth of recorded music to the death of recorded human music was playing, thanks to Bob's extensive music collection. He had been disgusted long enough by that God damned computer garbage that he had replaced it with his own, vast collection of human music that covered hundreds of years of recording.

Bob and Will were discussing sheet music on a tablet on the table. There were no drums on the stage, as Joe needed a whole lot more practice before he could feel comfortable playing in front of people, but he had actually become pretty good, for a beginner.

Mary's chair elevated itself to bar stool height as she reached the bar. She lit a doobie as the robot set a mug of beer with a straw in it and an ash tray in front of her. There were two empty stools next to her, but few empty tables. It was a good crowd.

The band got on stage to start having a good time playing, as playing children always do. Of course, nobody ever really grows up, not even the geriatric. Not inside, anyway. Some people's souls die, but otherwise there's a child inside

every old codger.

Bill finished up in the pilot room, cursing that damned Mort for dying, and hurried to the commons. Maybe he could actually catch a show tonight, if that damned phone would shut up and let him be for a while. He sat down next to Mary, who started trying to get the best of him, female style.

Nobody ever really grows up. She pulled out a joint.

Bill wrinkled his already wrinkled old nose. "Excuse me," he said, and moved to the table Walt was sitting at by himself where the band had been sitting, with a smokeless ash tray and nobody smoking.

"That Mary!" he said. "I'm glad I'm not Ralph or Jerry. Damned woman was hitting on me. I'm four times her age!"

Joe grinned. "Is that what the company records of your entropy say?"

"No, that's what the tax collector says, charging me a year's taxes for a three month run."

"Good evening, ladies and gentlemen. We're going to start with a very, very old number called 'Moondance'."

Sue started playing her flute.

Harold, as usual, was missing the show, dealing with the various miseries elderly geezers always have most of the time, especially on a Saturday night. It seemed everybody started hurting or couldn't breathe or something every Saturday. He was treating George, whom he thought was his last patient.

"It hurts when I raise my arm like that."

"Then don't do that."

"Ha, ha," George replied sarcastically.

"Look, George, gettin' old ain't for wimps, you know? You think I don't have all the aches and pains and heartaches and misery as everybody else on the ship?"

"Can't you give me something?"

"You have arpirin, don't you?"

"Yeah, but..."

Harold rolled his eyes. "Let me tell you a little ancient medical history. About eighteen hundred, not sure the actual year..."

"Krodley! Ancient is right. How could it apply today?"

They didn't even have electricity, did they?"

"I don't know, but they made a drug named 'morphine' out of a plant that's now extinct, called a poppy. It was kind of like a modern pain diffuser, but if you took too much for too long, you had a physical need for it and would die without it, and taking too much at once would kill you, so they made strict rules; laws, actually, for its use.

"They developed more and more powerful drugs in that class, but in the twentieth century fascism was born, and was nearly wiped out in a world wide war but the nascent movement started taking hold world wide in the twenty first..."

"They taught us all this is high school!"

"Not all of it, they didn't. Just about how the entire planet became a fascist dictatorship. Now, the drug industry..."

"The drug what?"

"Believe it or not, producing drugs, actually all aspects of health care in the world's biggest economy between the twentieth and twenty first centuries was monetized. A diabetic without the means to afford enough insulin was doomed to a horrible death by ketoacidosis..."

"You lost me."

"Their blood turns to acid."

"They were really that cruel?"

"That's what happens under fascism. Poverty could result in death by torture. But anyway, the opioids, as they were called, were legally only used for acute pain until the heartless drug dealers, very rich people who made medicines that doctors prescribed, somehow convinced everyone that their drugs could be safely used for chronic pain. The result was millions of people addicted to the drugs the drug salesmen pushed, dying from overdoses, stealing to support their habits... it was awful. Believe me, you don't want to go back to that. How about using a diffuser if it hurts that bad?" His instruments told him that George was in less pain than he was.

He shook his head. "I can't think straight with one of those."

"Drugs would be worse. Let's get a beer and listen to

some music.”

“It’s Saturday?”

“Well, yeah!”

They walked down, and entered the room as raucous applause was ringing. “Good,” Doc said, “We didn’t miss it!”

Before they reached a table, the applause died, and Bob’s amplified voice said “Thank you! Thank you! You’ve been a great audience, we’ll see you next Saturday!”

“Well, shit.”

“Sorry.”

The next “Wednesday” after practicing a couple of songs, Bob said “Well, what do you think, Will?”

“He’s ready.”

“Sue?”

“Yeah, I agree. He’s getting pretty good.”

“Well, Joe?”

“Well, I don’t know, what if I freeze up?”

Bob said “I can set the lighting so you won’t see anything but your drums, and in case you still freeze up I’ll have it set so that spotlights only shine on anybody performing. Remember, they never heard “Stairway” with drums before. The ancient recording hasn’t even played before the shows.”

“Well, I guess.”

Bill dodged another rock, or ice chunk, or something. It was nothing like the earlier iceberg’s close call, and only needed a tiny course correction. Nobody had to strap down. But boy, he thought, this trip’s a rock show. There are more rocks and ice cubes than I’ve seen in space before. Will it be like this all the way to Anglada?

But he was traveling far faster than he ever had before, in fact faster than anyone but the Sirius expedition had ever traveled. And not only does time slow down, mass increases. The craft’s enormous mass had greatly disturbed the movements of thousands of rocks, boulders, mountains, asteroids, and comets. It would be hundreds of years before the effects would be seen, and nobody was likely to figure out its cause.

Earthians in the southern hemisphere would see a lot of shooting stars, Rio de Janeiro would be completely destroyed by an asteroid, and a Martian dome would have a close call. But not for hundreds of years. Right then, “right then” being a meaningless concept in this context, Mary was in the commons with a deck of playing cards, teaching Sylvia and Mrs. Harrington how to play Snap the Packle. Not that it would do anybody any good without money.

Two days later there were four of them playing Packle as the band set up; most of what was being set up were drums for Joe. “Think you can start the show? You do that one song really good. How about it?”

“What if I freeze?”

“Well, hell. I was going to start off by introducing you...”

“I know everybody on the ship!”

Bob sighed. “But I’ll introduce you *as our drummer* after the song’s finished, then, and if you freeze I’ll start off with *Stairway* like we did before.”

“Packle!” someone yelled from the back of the room.

“If they do that while we’re playing I’m going to knock whoever it is right off their chair!” Will said as Joe screwed the last thumbscrew on the last cymbal.

Bob sighed again. “I think Jerry or Ralph might have something to say about that. Look, Joe, whenever anybody yells ‘packle,’ hit your snare and your bass and your cymbal. Make some noise.”

Will grinned. “Even better. Everybody ready?”

“Packle!” someone yelled.

CRASHBOOMKLANG!!

The whole room became quiet, everyone staring at Joe. Joe giggled, and broke into a guffaw. Pretty soon everyone in the room was laughing. Then...

The sound of bang boom boom bang, boom boom boom boom bang boom boom bang, boom boom boom, bang, bang bang bang bang, then guitars, one a bass guitar that Will had been learning, followed by Sue singing “Been a long time since a rock and roll...”

Joe had become a musician. For real!

“Damn, that’s loud,” someone in the back said. Of course, no one heard him. It was loud. When you have drums, most other instruments need amplification.

Doc was in the infirmary with a patient, missing the show, as usual. Later as he was treating his last patient, he said “Think you’ll be okay now, Vickie?”

“Yeah, I can breathe now. Thanks, Doc!”

“Don’t mention it. I think I’ll go to the commons.”

“I think I’ll read. See you.”

“See you.”

Vickie went toward her rooms, and Harold walked toward the commons. Damn, that’s loud, he thought, hearing a very loud drum solo. “I hope nobody’s hurt,” he said out loud, and walked faster, wondering what kind of horrible accident was causing that racket. “Sounds like something went wrong with the machinery,” he said. “I *sure* hope nobody gets hurt!”

But this was the first time anyone alive, except the musicians, had ever heard the first musical instrument ever invented and the first time anyone living had ever done a drum solo, and computers never did drum solos.

A day later, Doc traded Mary’s wheelchair for a walker. Monday it was a cane. Wednesday she walked to Doc’s office carrying it, to drop it off. He wasn’t in his office.

He was in the infirmary with Annie McGee, a very short, skinny (for a spacer) eighty year old biologist who had fallen and broken her hip. Harold was worried, as many of his patients her age who had similar injuries died from them.

Of course, it necessitated surgery. The robots were working on her. She had opted for sedation, saying “Hell, yes I want fucking sedation! Before you put that damned lardlicker on my forehead I couldn’t fucking stand it!” Harold had marveled at her grasp of vulgarity, cursing as well as any eighteenth century sailor, or twenty third century marine.

Mary dropped off the cane and went to the commons for lunch. She was looking forward to Saturday. She wanted to dance. Never mind that dancing was almost as obsolete as human musicians, at least in space. Dance had run in her

family and her Earthian immigrant parents had taught her. They had told her that her great great grandparents were famous professional dancers. Mary never believed that, getting paid to dance? Nonsense!

She sat at a table and ordered lunch, and fired up a doobie. This stuff Ralph's growing ain't bad, she thought, but she missed her four twenties. She thought that was a really stupid thing to call muggles, but she loved the taste and the high of that brand.

But Ralph's a pretty good gardener, she thought, and took another toke before having a huge coughing fit.

Doc came in. Mary said "Doc, I dropped off the cane at your office."

"Thanks." He sat down at a different table. Annie's surgery had gone well, and he had adjusted the pain diffuser on the back of her neck so she would be paralyzed from the chest down, and the pain would be felt painlessly, its presence there noticeable but not mattering.

The diffuser was glued to the back of her neck. If it came loose, the shock of the sudden pain could be fatal, as well as re-break the bone and necessitate further surgery if she survived the shock.

She read a magazine on a tablet. She laid it down suddenly. "Shit! Layno! Fucking Grodlick! Mut! ¡Mierda! Merde! Der'mo! Kak! I'm going to miss the gackle hurling show Saturday! Trumpshit fucklecropper!" She cursed for a full five minutes before picking her "book" back up, just as Bill rang the doorbell.

"Can I come in?"

"Sure. I'd get up, but..." she said grinning.

"Are you going to be okay?"

"I guess, ask Doc. Gonna miss the fucking grapehung show Saturday, though, damn it."

"Probably be a few weeks, won't it?"

"Yeah, and Doc says I'm haven ta larn how ta walk again when he can taken the diffuser off," she said, her Vegan accent slipping through. "I caint larn nothin' at my age! Hooda heard o' anybody larnin ta walk at eighty!"

“Well, you’ll be in a wheelchair before you can walk, but I’ll bet Doc will have you running the hundred yard dash in ten seconds!”

She laughed. “I ain’t ran nowhere for twenty years, sonny!”

Bill laughed. “Sonny? Annie, I’m almost four times your age!”

She frowned. “I’m eighty, boy!”

Bill laughed. “I’m two hundred and forty five.”

“What? That’s impossible!”

“When we land you’ll be about a hundred and ten, depending on what year it is back in reality.”

“Two forty five! Damn, and I thought *I* was old!”

“Glad you’re going to be okay, Annie. I have to go take readings, but I’ll talk to Will and see if we can get the show on your holo screen.”

Every wall on the ship was a holographic screen, able to change colors at will, display artwork, holographic movies, anything. Most people ignored the walls, though, as if it was still the year 1498 and paint wasn’t holographic. Your wall was your holographic television; any wall. It was installed exactly like paint had been installed back in the seventeen hundreds before the wallpaper fad took hold in the late eighteen hundreds and early nineteen hundreds.

He took his readings in the pilot room and went to lunch. Joe was there, and he asked about setting things up so Annie could watch and listen from her room.

“Packle!” someone yelled from the crowd.

“I hate that game,” Joe said.

Bob set it all up the next day. Unlike early digitally recorded music, which had a frequency response limited to just above the range of human hearing, modern recordings were done at a hundred times the sample rate of the original digital music, leaving in all the ultrasonic harmonics that perceptibly color the audible frequencies that were missing in early digital recordings. It was truly like being in the room with the musician, even though the musician was a computer on a different world. Of course, there was no way to add the

missing samples from the primitive digital recordings.

After Harold visited Annie the next day, he called on Bob to see if he had recorded any of the concerts. “Everybody seems to get sick or hurt or something every Saturday night.”

“Hmm, we haven’t been recording them, but since you said something I don’t see why not. I already have the holographic cameras set up for Annie, and the sound system is built-in. We might actually make some money out of it when we get back.”

“If we’re still alive.”

“I’ll only be seventy five. It’s not like I’m from Earth!”

Doc laughed. “If you were from Earth you’d probably already be dead. They don’t live very long there.”

“Hey, we could replay them in the commons a few days later!”

“You could add your music to the antique stuff you replaced the computer music with.”

“I didn’t think of that, we could!”

“Don’t replace it all, I love most of the earliest stuff, the stuff from the twentieth century.”

“Packle!” came from somewhere in the room.

“You mean like Jolson, Goodman, Dorsey?”

“Yeah, they were good, but Berry, Clapton, Hendrix, Van Halen... Shit.” His phone alerted. “Annie’s robot called.” He got up and ran.

“Hope she’s alright,” Bob said as Doc ran out. Robots didn’t usually call unless the patient was close to death. He rushed into her room.

She was reading, and looked up. “Doc? You okay?”

Harold looked puzzled. “I was going to ask you the same thing.” He pulled out his phone to look at her vitals. All were as would be expected if the computer hadn’t signaled she was dying.

“I’m fine, Doc, but you look a little frazzled.”

“Equipment malfunction. Scared the hell out of me, I thought you were dying!”

She laughed. “Not yet, Doc!”

He texted Bill about the malfunction, hoping nothing

like that would happen to the engines. Bill also hoped nothing like that happened to the engines, but that's why there were four separate computers in parallel running the ship. A stray x-ray or gamma ray photon could, despite the ship's magnetic shields, hit a transistor and change a one to a zero. That can be catastrophic in a digital computer that's running life-critical systems.

Saturday before the music started, Bill was in the commons at a table by himself by a wall. Of course, there was no ash tray; they attracted smoke. There were already quite a few people there, and more were slowly trickling in.

One of the antique songs that Bill didn't particularly care for was playing. "Stayin' alive! Stayin' alive!" it crooned. He thought of the possible doom any trip subjected one to, when Mary walked up to his table.

"Come dance with me!" she ordered.

"No, thank you," he replied.

"Oh, come on!"

"Tried it once, hated it."

"Suit your self," she said, and walked away frowning, looking for someone else to pester, not realizing that she was being a pest. Bill was amused.

"Packle!" someone yelled from across the room.

"I'm starting to hate that game," Bill said, although there was no one close enough to hear him. A robot rolled over to fill his beer, ignoring his comment. The band trickled in one by one and sat at a table near the stage, their instruments already set up and tuned. Bob came in last, carrying a hard body guitar case, despite his normal guitar on a stand on the stage. Mary walked up.

"Anybody want to dance?"

Nobody wanted to dance. She went to the bar.

"New axe?" Will asked.

"Kind of. Just had the robots print it out. It's a Dobro." He took it out of its case and handed it to Will. Will played a one-handed G chord and a surprised look came over his face. "I want one of these!" He took it by the neck and played an A minor. "Wow!" he exclaimed.

“Packle!” The game, apparently, went on. Or more likely, several being played at once. Mary and Mrs. Harrington had started an onboard fad.

Shortly before the band assembled on stage, when they were nearly ready to play, someone yelled “Packle!” Originally a gambling game, they had been using doobies to keep score, and were starting to refer to joints as “packles.” Will lit one and passed it to Bob.

The robot bartender was as busy as a robot could be, all six telescoping arms swiftly dispensing drinks and ash trays, while three wait robots (nobody knew why they were called that, and few cared) ferried drinks and ashtrays on their trays to patrons at tables.

Someone started to yell “packle” and was interrupted by someone louder yelling “ROCK AND ROLL!” followed immediately by Joe. “Bang boom boom bang, boom boom boom bang boom boom bang, boom boom boom, bang, bang bang bang bang bang...”

It was loud. You couldn’t even hear the yelling of packle players, let alone the gurgling bongos, although once the sound of a dropped beer bottle shattering was audible. As usual, Harold was stuck in his office treating a patient. At least, he thought, I can see the show now. Tomorrow, anyway.

Mary had been trying, very unsuccessfully, to get anyone to dance with her. She sure wasn’t going to dance by herself.

Dancing had never caught on in the “little worlds” as Earthians often called the inhabited bodies. Some had often tried to dance, but even on Mars an attempt to dance was pathetic, and with a gravity belt it would be unwieldy. On an asteroid it would be impossible, but it was still widely practiced on Earth. The state psychologists saw to that.

The next day Mary posted an ad for dancing lessons in the commons before sitting down at the table where Mrs. Harrington, Sue, and Annie were playing Packle.

She had become a new woman, thanks to Ralph and Jerry’s treatment.

Nobody could believe it. Nobody *did* believe it, wisely

figuring that it was just another of her evil little selfish tricks to get over on people. But the psychologists believed it. But they knew of her treatment, nobody else but Harold and Bill knew.

“We can’t follow the normal procedures,” Ralph said.

Jerry laughed and shook his head. “Maybe we should have waited until we were back to the solar system!” Ralph joined the laughter. After a life of sociopathy, the sociopath is untrustworthy, and nobody can believe that this tiger can change its stripes. Ordinarily, instruction would be the same as had been given way back in the twenty first century to those who had been treated successfully for substance abuse disorder: move to a different city. With substance abuse, it was to get away from “triggers” that would seduce the addict to use again. For sociopaths, it was because there was no way anyone would believe there had been any change, especially since the sufferer didn’t see it. And sociopaths were used to new crowds, unlike addicts, but they were over half a parsec from the nearest new city.

Mrs. Harrington had become friendly with Mary even before her treatment. Her autism got in the way of discerning Mary’s dishonesty, or her sudden honesty. She just didn’t notice, other things were more important. Like that still unsolved four hundred year old math riddle that often haunted her, especially whenever it woke her up in the middle of the night with the answer that she always forgot before she could jot it down. She could *almost* see the answer.

“Packle!” Sue yelled, breaking Mrs. Harrington’s reverie. “Fuckletrumper!” said Annie, and threw her cards down. Mary was losing, and nobody cared, or even noticed. This despite the fact Mrs. Harrington hadn’t been paying attention; she’d been holding a winning hand for ten minutes. The three each threw a muggle on the pile on the table. She collected the pile and lit one, passed it, and coughed.

Mrs. Harrington finally noticed her hand. “Oh, my!”

“What?”

“What do you do when you have two packles?”

Sue said “And tell everybody after somebody just

collected?” and laughed. “You kick yourself in the ass and start paying attention!”

Mrs. Harrington reddened. It made Mary feel bad, and she patted her on the shoulder. “Don’t feel bad, you should have seen some of the stunts I pulled when I first started playing!”

Of course, Sue was sure Mary had an ulterior motive. She knew her. At least, she knew the the pre-treatment Mary. “New game?”

“Sure,” Mary agreed. “Mrs. Harrington?”

“Okay. Who’s dealing?”

“Sue.”

Rather than his customary paper book, Ralph had a tablet in his hands as he watched his subjects, with a book showing on it. He saw the change in Mary, as did Jerry, but nobody else seemed to; or at least, believed it if they noticed it. It was too bad she hadn’t gotten treatment before the journey, he thought.

It was sad. The poor woman.

Anglada

The instruments told Bill that they had entered a heliosphere, but he didn't know whether it encircled only Proxima, or the entire trinary star system. Was there bow shock between the three stars in the system? The telemetry would likely inform the astrophysicists, in another four years when the signal reached Mars. He couldn't detect any planets yet, but again, the astrophysicists probably could, when the data arrived.

Astrophysicists had mature tools that had been in their infancy in the twentieth and twenty first centuries. Back then, radio telescopes and gravity wave detection were brand new. These days, for instance, the gravity wave detectors could pinpoint the movements of bodies as small as a gas giant planet. It had been a long time before they could ever detect anything but giant black hole or neutron star mergers, but the modern detectors were in space and far more delicate. There had also been an awful lot of scientific advances that led to technological advances.

But Bill still couldn't see Anglada. They were only weeks away from it, the closest planet to Proxima. Having braked for half the trip, they were rapidly decelerating and would be at a near standstill when they were at the point where he could ease the craft into orbit.

This would be trickier than any other orbit he had ever entered into, as he had no idea what the planet's mass was, at least no more accurate than "a little more massive than Earth," and neither yet had anyone else. But it would be just another maneuver. He was looking forward to it; the mass could be accurately measured when they were close enough.

They had left Mars several months short of eight years earlier, and would be in orbit around Anglada in a few weeks

or less.

When his duties in the pilot room were finished, he headed to the commons for breakfast. Its robots were better cooks than his robots. His robots were antiques, bought from the company when he first became a captain after high school, paid for by credit that would be deducted from his pay. It didn't matter, as unlike Earth where everybody but the very rich had to work, spacers had the choice to work or not, as had been previously the case on Earth as well, before Earth had become an authoritarian hell hole.

He passed Walt on the way, who was headed downstairs. "Going for breakfast?" Walt asked. "I just came from there. The omelette seemed especially good."

"Yeah. Oh, do me a favor, will you? Check out number two forty real good, its pilot room readings were a little abnormal."

"Up, or down?"

"Both."

"Shit. I'll call you." He left towards the stairs in a hurry.

Of course, this worried Bill a little, but there was no point in dwelling on it. If something was wrong, Walt would call. He walked into the empty commons and ordered an "Irish Omelette"; egg, shredded potato, chopped corned beef, and minced onion. His phone rang as the robot rolled away with his order.

It was Walt. "Bill? It's all cool, it's just a corroded contact. I'll replace it when it cools enough."

"That's a relief, thanks." There were a thousand things that could have caused those readings, most of them disastrous. Luckily, this one was harmless and Walt should be able to fix it easily. Of course, "fixing it" couldn't be a whole lot easier, since it involved pushing buttons on a robot's remote panel. Easy as long as you knew what buttons to push, and in what order, when, and why.

Walt was downstairs with a silent "whew!" The bad contact was easy to diagnose, because it was shooting sparks. If there had been anything flammable there, it could have caused a fire. He finished inspection while it cooled, logging a reading

from a different motor, replaced the contact and headed home upstairs for a shower and breakfast. It had been hot down there today.

Mary had put up a playbill in the commons long ago, advertising dancing lessons. Nobody wanted to learn. She finally came in, took it down, took a toke, said “fuck dancing,” and ordered a beer.

Walt, cleaned up and filled up, was on his couch resting, as was his habit after climbing the stairs. He was watching the latest Martian football game he had access to. It was different than Earthian football; it had to be, because of gravity. The field was four times as large, and the balls were weighted, the same size but three times as massive as a football on Earth. “American football” as it had been called was long forgotten, not having been played for centuries, and neither had any other sport on that planet since the supervolcano had exploded.

The New York dome was beating Australia. Odd how some domes had been named after Earthian cities and countries, what with spacers not liking Earthians, he thought.

Saturday night came, if it could actually be called night, or even Saturday, and the band was setting up. Bob surprised everyone in the band by pulling a harmonica out of his pocket. “Next Wednesday at practice, there are a few songs I want us to learn,” he said grinning. “Excuse me, I want to shake up *Stairway* some and use the Dobro. Be right back.”

Mary was already partying, at a table in the back with four others playing Packle. She was on her third martini and no one had yet yelled “packle.” There were a lot of doobies on the table, as they were the stakes. Might as well have used straws or napkins, one was being passed around the table as Mary sipped her martini.

Ralph was keeping an eye on her, pretending to read a book. He and Jerry had determined that the treatment had been effective, only he wanted to be sure. Unlike the holograms that laid on tables and looked like antique three dimensional books made of paper, he had a real book, a three hundred year old antique. Printed books were still being

produced, but often were just show pieces, sometimes without any printing on the pages. Its title was “The Traitorous Chartov.”

Bob saw the title as he walked past. “Wow, I didn’t know you were a student of ancient music!”

Ralph’s brain fumbled a second. “Uh, I like history. Just started reading this and kind of zoned out. Who was that ‘Chartov’ guy?”

“Chartov was an incredibly talented guitarist and dissident folk singer who was executed by the Russian government before the Great Establishment. That’s a great book, I have a copy.”

“You mean when Gatstro conquered China and took over the world?”

“Before that. Hey, I need to get my Dobro, I’ll talk to you later.”

When he got back with a different guitar and a stand, Will asked “What’s that thing you had in your pocket before you got your Dobro?”

“What, this?” he said, pulling the blues harp out again. “A harmonica, another ancient instrument.” He played a verse of “Turkey in the Straw”. “There are some really good twentieth century and older songs that use these. They were especially popular in the American west in the eighteen hundreds.”

Sue said “Robot” and lit a muggle. A robot came over with a beer as she passed the joint and started coughing. “One more beer and we play, okay?”

Bill was in the pilot room. He had pinpointed the planets’ orbits, including Anglada, and had determined its exact diameter and mass. The computers would compute the trajectory for orbit and slip the ship into it. It had all been pre-programmed by the computers themselves; these days programmers only told the computers what to do in standard interplanetary like everyone always spoke.

It appeared to have two satellites. One was sizable, nowhere near as large as Earth’s moon but larger than either of Mars’ little moons. The other was tiny, no bigger than one of

the Titanic's twenty six ships, although baseball sized rocks were called asteroids when they were in space, and satellites when they were orbiting something. He decided to make an announcement.

"Bill here, folks. We'll be orbiting Anglada in about two hours. I'm turning on the hologram in the auditorium so everyone can have a look when we get closer."

Ralph, in his office by himself, said "Huh?" He stopped writing and started walking to the commons. He had never seen a planet bigger than Mars close up. Few had. For many, this was their very first trip to space, and the Martians hadn't even seen Mars. Considering the late Mort was captain, the asterites probably didn't either.

The musicians stopped playing and the commons filled up quickly, most going in the auditorium. Its huge, two story tall hologram, looking like a missing wall looking out into space, faced the rear of the craft, pointed in the direction it was moving. Doc had run, fastening his shirt as he sprinted, one of those who had never been in space before.

The star was a virtual white dot; no screen can shine as brightly as a star, not even a hologram. It was much brighter than the two next brightest stars, which were much brighter than all of the other stars in the screen. They were the other two stars in the system.

Then as Proxima got bigger and brighter, one star that had been too dim to see started getting brighter, until it was brighter than Proxima's sister stars. It was Anglada. They were almost there. The dot got bigger and bigger until it was visible as a tiny hemisphere. By then, Proxima looked almost as big as the Sun from Earth, bigger than from Mars. Anglada was far smaller looking.

Before long, they would be in orbit and floating, and Bill was excited. He had taken a good look at the tiny satellite, and discovered that it was the Earthian robot from fifty years before they left Mars.

Now, Bill had a slight problem: the book was wrong. There were originally supposed to be three captains, but they had only found two, and Mort had died. The book said a

captain had to stay with the ship at all times, and also that a captain must stay with anyone on the planet. Obviously the computer that wrote the book either didn't "know" that old people often die, or thought that Bill could be in two places at once.

He called his two engineers and asked that they would meet him in the pilot room. They were in the commons, watching the hologram, which would look creepy to you or me, a missing wall with outer space on the other side of the missing wall.

"Damn!" Joe said. "I was getting into this!"

"Oh, well," Walt said. They went towards the pilot room. "I sure hope this doesn't take long," Joe said.

When they got to the pilot room, Bill said "Sorry to call you in here like this, but who wants to be a captain?"

"Not me!" they both exclaimed in unison.

"Well, shit," Bill said. "We're the only three without planetside jobs, except Bob, and we're at least one captain short since Mort died. I'll tell you what, whichever one of you doesn't want to be captain won't have to. You can do both shifts in the dunge... uh, basement."

"That's easy," Walt said. "I hate those God damned stairs! I'll be captain!"

It's odd how the mind works. A mind gets used to a thing and expects it, even when it should know better, like someone agreeing to be captain because he hates the stairs, when he'll floating not long after he says it.

"Okay with you, Joe?"

"Hell, yeah! I love it down there and don't know shit about being a captain."

"Okay, Captain Rollins, you still report to me but you're captain when I'm on the planet."

"Okay, can we go back to the commons now?"

"Sure, I'll go with you. It's half an hour before we get all the way into orbit and I have to oversee the last adjustment."

"Well, shit," Joe said. "I guess I'd better get downstairs. See ya."

"Have fun," Walt said.

Ten minutes later Joe was back. “Cool, I didn’t miss it.” Bill went into the pilot room. The planet’s surface covered the bottom third of the screen. You could see that it had an atmosphere, and oceans. The star looked about the same size as the sun, although they said it was a lot smaller. It just looked the same size because it was closer.

Bill was very busy. Pilot room readings told him that the atmosphere was ninety nine point seven percent nitrogen, and the rest various other gasses in tiny amounts, none poisonous. There was practically no carbon dioxide, although their breathing alone would add an imperceptibly tiny bit when they landed there. Air pressure was a little higher than on Earth or in most spacer domes. They wouldn’t need an environment suit, although they had been provided for the trip since it was unknown, but they would need oxygen masks.

It appeared from the atmosphere that this planet would likely be lifeless. You can’t have plants without enough carbon in the atmosphere to turn the carbon dioxide into plant matter, like plants always do. And of course without plants there could be no animals. But then, the plants on Grommler that the Sirius craft visited weren’t based on DNA. Maybe it had some weird kind of life that didn’t need carbon, but he was no scientist.

“Carbon,” he thought. “The only element in the known universe to ever gain sentience,” although sentience needed other elements, too. He put the data on a patch of screen in two dimensional format. The scientists would be interested in these data, and would understand it a hell of a lot better than he did. Though he was largely self-taught, Bill had a healthy respect for formal education, thanks to his ex-wife.

He pressurized the necessary ships in the ring and turned on the heat in them. All would be well below freezing. Should have done this an hour ago, he thought. He went back in the commons. “Hey, Jerry,” he said. Jerry looked at him. “Can I have a word?” Jerry got up and followed him into the hall.

Few noticed, all ranged from slightly buzzed to zombified, enjoying the mindless entertainment on the screen,

the planet moving beneath them. Several were looking at the data, which they would examine carefully later. Like in the morning when they weren't stoned and had their morning coffee.

"Could you and Ralph make the decision of who should go? Seems you two are the most qualified to make a decision like that."

"Sure, I'll talk to him now. How many passengers?"

"Seven. I'll let you guys decide, based on their fields. Oh, I think one of you should go, too. I'll go the next trip, take Walt this time, he can be the landing captain. Meet you in the craft holding the landers in, oh, forty five minutes, okay?"

"Sure."

The book said that a crew member should scout the surface for dangerous life, but the book was wrong in this case. No life means no dangerous life, and since nitrogen is inert, it can't keep anything alive by itself.

Bill went to the bar and ordered a beer. He'd seen that "circle the planet" show before. Probably a great show for these stoners. It was a boring re-run for him. He had the table display a book. By the time he finished his beer, Served in a sippy with a bag inside, of course, it would be time for a few folks to visit an alien star's planet.

Later, Jerry's voice came from all the recipients' phones' speakers: "Lawrence McMahan, Susan Nommie, Sylvia Hestor, William Lathiter, Arthur Chu, and Walter Rollins, please meet me in... uh, the commons." As good a place as any, he thought.

They assembled there, and all walked around the circle of ships to the one with landing craft and down a flight of stairs. Bill was waiting. "Well, you guys all ready?"

"Who's driving?" Walt asked.

Bill gave him a troubled look. "You are."

"I don't know how to drive one of these things!"

"Well, hell, I guess I am, then, and you're captain until I get back. Don't worry, you don't need to do anything in the pilot room. Damn that Morton! Bastard had to go and die on me. Jerry, I need to give everybody flying lessons. Lets get in."

He handed his hat to Walt. It was rather big on him.

Once they were all crowded inside the craft, he said “Just watch me, flying these things is really easy. You have a wheel to turn to the right or left you could make yourself dizzy with, this slider for backwards or forwards speed, this up and down arrow for up and down, just hold an arrow until you’re at a good altitude, or you can punch in a number here for meters above the ground, or here for meters above sea level. The rest are marked and self-explanatory. You couldn’t crash one of these if you tried, and a lot of people have actually tried.

“Here are the buttons for autopilot, here and here. This one automatically takes you to the ship. It’s that simple, and we can place a marker down there and the next one will land automatically when you push this button. I’ll go first. Just watch me.”

It was far faster going to Anglada from orbit than it was from Mars to the interstellar craft, as quickly as if they had parachuted. They came down over a lake, and Bill was having fun, treating the craft as if it were a boat before rising and heading towards sand.

“Ready for a beach party?” he asked grinning as he landed on the beach. Everyone put on oxygen masks.

Will frowned. He wanted rocks and mountains, but would have time enough to travel later. This was just a preliminary excursion. At least now he knew... very little. He got out a magnetometer. This planet had a good, strong magnetic field. Must have an iron core, he thought. At least he could get some sand to sample and study, he thought sarcastically.

Nobody thought the unthinkable: they would be outside without an environment suit. Outside! Most had never been outside, and everyone knew that without a suit it was deadly. All of their lives its danger had been drilled into them, except for Bill, who had been born and raised in Canada and had spent several years in Arizona.

Sue, the hydrologist, laughed and said “It has water.” Everyone grinned, but she was worried about the planet’s gravity, and trying not to show it.

Jerry said “Who’s doing the drones? We can’t know who needs to go where until we get a picture of the planet.”

Larry replied “That’s my job,” and was the first one out of the landing craft. He loosed the drones while everyone else exited. “Uh, half hour ought to give you some good data. Damn, but this is weird. I feel like... I don’t know, like I...” He said as the others exited, and shivered.

“Feel naked,” Sue said. “Being outside without an environment suit is kind of gross and really weird. Even scary, kind of, in a weird way.”

Bill just grinned. He was only cold.

Sue was puzzled, and wondered why no one else was puzzled, too. “Where’s all the oxygen? All this water is dihydrogen monoxide, doesn’t this place have electrical storms? That should release oxygen from the water.”

Jerry said “do we have a marine biologist? Maybe there are fish of some kind?”

“Without plants?” Bill said.

“Maybe there are plants, but they’re all underwater?”

“Then where’s the oxygen?”

Will shook his head. “Doesn’t seem anything like I expected. Proxima is a red dwarf, why aren’t colors different?”

Jerry said “Easy, your brain compensates and you don’t notice. On Earth, everything takes on an orange hue in early morning and late evening but few notice.”

Sue, relieved that she wasn’t squashed by gravity, finally got the will to say “Hey, I’m from Pallas and it doesn’t seem like it’s any more heavy than Pallas, I thought it was supposed to be like Earth?”

Bill said “That was my doing,” and blew on his hands. “I raised gravity on the ship little by little, so little you didn’t notice. You could go to Earth without an exo!” He blew on his hands again, turned up his clothing’s temperature controls with his phone, and wished for gloves. “Oxygen? How about some nice warm carbon dioxide? Are those drones back yet? I’m freezing. Next time I come down I’m wearing an environment suit.”

Hundreds of years earlier before people walked on any

worlds but the Earth and the moon, people were extremely careful to make the craft completely sterile and lifeless, but they were looking for life outside Earth. They would have worn environment suits to protect the environment from themselves, rather than the other way around.

Presumably they never found it until the Sirius expedition, although there could have been life that was missed and inadvertently destroyed by ignorance or carelessness. It could have been found and then lost, a lot of data were. It was certain that nobody cared any more.

Mark took soil samples, not expecting to find anything alive in it. Susan took a jar of water, just for laughs. Will took a bag of sand. Sylvia took holograms. Nobody took their time and were back in the landing craft as fast as they could go.

“Sorry, guys,” Jerry said shivering when they were back in the craft. “I should have warned you about agoraphobia. Nobody’s ever been outside without a suit before. I should have remembered and warned you.”

“Who wants to pilot this thing back?” Bill asked. Nobody answered. “Okay, Ralph. You’ll have to be pilot on the next trip, anyway.”

“What do I do?”

“Press the one marked ‘home’.”

He pressed it. “What do I do now?”

Bill smiled. “Relax and enjoy the trip!”

Up in the orbiting ship, Bob had programmed the wall behind the stage, making it the same view as the auditorium wall looking out at the planet. Most folks had tired of the circle show and had moved back to the bar, tables, and their rooms. Bob picked up his guitar and started singing. He found it hard to play without gravity and he had to actually think.

“Sun turnin’ ‘round with graceful motion, we’re setting off with soft explosions, bound for a star with fiery oceans...” As he sang, an ocean sunrise was on the screen behind him. Couldn’t have done that on purpose if I tried, he thought as he sang. The landing party got back to the commons as Bob started the ancient tune “Space Station Number Five.” Being in orbit around an alien star’s world had apparently gotten to

him. The party split up, Sue and Will leaving, but were back before Bob finished the song. Sue had a smaller flute, Will his new Dobro.

They didn't play. Bob was playing ancient tunes about outer space, some of which dated to before people had ever gone past Earth's atmosphere, none of which Will or Sue knew.

The next morning, Bill was in the pilot room, Joe was in the basement, and Will was looking at the newest correspondence from his grandson, who, according to the letter, was now twenty five. Since it had taken four years for the message to reach Anglada, Billy would be close to thirty now. He guessed he could look at the date stamp on the document and add four years, but that wouldn't be entirely accurate, either, unless you knew *exactly* how far Anglada was from Mars. "Four light years" isn't very precise when it comes to how long radio signals go to Mars from Anglada.

Joe's phone rang. It was Bill, asking him to meet him and Walt in the pilot room when he finished up downstairs. Walt got there first. Bill said "I'm going to the robot ship to see if there is any information we can transmit back to Mars, so you'll have to be captain for a while."

"You'll need an engineer."

"I know," he said as Joe came in. "Here he is. Joe, how would you like to see if we can get the robot ship to talk to the Titanic?"

"Sounds like fun. I'd like to look at its propulsion, too, just out of curiosity."

"Well, if we have time." He was curious, too. Not a GOTS vessel, not even a rival spacer vessel, this craft was Earthian. He hadn't seen an Earthian ship since when all the transport companies were based on Earth, when he first started working for GOTS over two centuries earlier, stationary time. An awful lot had changed in his long life.

Walt went to the commons for breakfast. He was discovering, as were the other passengers, that in orbit you ate from flexible plastic tubes.

Joe and Bill went around the ring to the hangar deck. Joe started to get into a landing craft.

“Wait a minute, Joe, we’re going to need suits.”

“Huh? Why?”

“It’s a robot. There won’t be any air or heat. I hope we can get inside the thing without a spacewalk. Hell, I hope we can get in, period!”

They donned environment suits and got in the landing craft. Bill took off, showing Joe how to fly it as they headed to the robot.

As ancient as the ship was, there wasn’t any documentation for it left at all unless there was some inside. Bill counted on that. Before records were computerized, records were only lost to fires and floods and other disasters. Since the invention of electronic data processing, there were more data from a millennium earlier that still existed than a century earlier. But it wouldn’t matter, if it was all on Earth. They couldn’t have even gotten to it if they were on Mars.

They flew to the robot, looking for a way inside. Maybe it was completely crammed with equipment and there was no room inside for people? It was a hexagon-shaped tube, unlike the rectangular spacer ships. Bill and Joe both wondered why. But then, a door on its side opened. “There!” Joe exclaimed.

“I see it.” He flew the craft inside the other craft’s opening, wondering why they designed it like that, but glad they had. He wasn’t looking forward to a spacewalk. The door closed, and Bill tried to call the Titanic.

“Damn,” he said. “This thing’s really shielded well, I can’t get a signal.” He got a mapper out of the landing craft, a small device that flew around creating a visual map of wherever it was, and some compressed air propulsion units, as there was no more gravity in the “Donner,” as they had started calling it, than in the Titanic where the steering breezes were from the ship itself.

The map drew itself on their phones. “I can’t read the writing on the signs,” Joe said.

“It’s Russian. Tell your phone to translate. I’ve found the pilot room, let’s go there first.”

It appeared that this ship was designed and built to be flown by humans. The suit readings said that the temperature

was chilly but not freezing, heated by radiant heaters, but it also had air. The pressure was less than Earth, but more than most domes and more than the Titanic, although there were components in the Earth's air that were in the ship. Not wanting to smell that nasty old Earth, they kept their helmets fastened. Everybody knew Earth stunk like something dead and rotting mixed with pungent, unnatural smells.

"All right!" Bill said excitedly after they had reached and examined the pilot room. "Full operating manual, full repair manual, full trip log. Think you can fix the radio so we can transmit it?"

Joe was on the ground, halfway inside an opened panel. He crawled back out. "I don't have a clue, sorry. I don't recognize anything in there."

"Well, let's see, how can we get the data to our boat?"

Joe pulled out a plastic and gold chip. "No problem!" and put it in a slot and touched a couple of contacts. When a light lit, he removed it and handed it to Bill. "How's your air? I wanted to examine the engines but I can come back, and I'll understand them better after reading the manuals, anyway."

"Plenty, but let's go back anyway. We both have some reading to do."

Back on the Titanic, Bob and Sue were in the commons wondering where Will and Joe were. "Where's our drummer?" Bob demanded before Will floated up. It was obvious to Sue where he probably was, in the pilot room or downstairs. Will knew where he was. They both laughed, and Will said "Some of us have to work for a living!" Bob grinned. "Earthians!" he said, and lit a muggle. "I think I'll get breakfast. Menu," he said as he passed the joint, and a holographic menu appeared as if by magic.

Just then Joe appeared, although not as magically as the menu, simply floating in through the entrance. Bob said "I just ordered breakfast, are you eating?"

"No, I'm not hungry and I have some reading to do."

Sue grinned an evil grin. "Spicy?"

Joe laughed. "Very. It's the operating and repair manuals for the robot ship we found. Hey, can we practice

tonight? I'm not sure I can even play without gravity. Drums ain't like a flute."

"I don't know," Will said, "I never tried to play without gravity before we got here and it wasn't easy in my quarters. I don't see how you could play drums unless you and the drums were hooked to the floor somehow."

Bob said "Guitar was possible without gravity, but it wasn't easy. It looks like playing's not going to happen this weekend. We'll need a lot of practice before we can play in zero G. Even Sue!"

A while later, Bill was in the commons reading the manuals when he made his discovery. "Holy SHIT!" He exclaimed excitedly. "I can take that thing down! I have to talk to Joe to make sure." More precisely than what he said, he could land the robot on Earth, if he was orbiting Earth. Of course, he wasn't. Ralph, who seemed to live in the commons these days, looked up from his non-holographic book, made of paper.

"Uh, Bill?" Ralph, always the worrier, was concerned. "What's wrong?" What was he going to take down?

"Nothing! I think this manual says I can land that robot on the planet. I need to talk to Joe." As if by magic, although actually with no ifs or magic involved, only coincidence, Joe appeared from a nearby table. "Joe!" Bill said. "Did you read the..."

"Yeah! Dude, we can *land* that thing!"

"Anglada's more massive than Earth!"

"I ran the numbers. That baby could land on a planet twice as massive!"

"Really?"

"Really! Let's go!"

"Well, I need to learn how to land it first. I'll call you."

Sue, at the other table with Will and Bob, overheard Joe and Bill. She said "I know how we can have gravity." A twinkle lit her eye. "We need a change of venue!"

Bob could see the gears turning in her head, but couldn't see where they were going, or even which way they were turning. He raised an eyebrow. "Care to enlighten us?"

“Anglada! All the gravity we want!”

“Uh, Bill?” Bob said to the captain at the next table.

“Yeah, Bob? Whatcha need?”

“We can’t play without gravity, how about we play on the planet?”

“I’ll let you know, I need to do some studying and listening.” Who he wanted to listen to were the two youngest people on the ship, the unknown leaders, the psychologists. Also he needed to read the operator manual more closely and see how many passengers the robot vessel could carry.

The next day he was in the commons arguing with Walt. “Damn it, Bill, you can’t do it! It’s too dangerous!”

“Nobody else is a pilot!”

“Neither are you in an Earthian ship! What the hell is wrong with you, Bill?”

Ralph floated up. “Something’s wrong with Bill?” He grinned at Bill.

“He’s crazy!”

“Uh, should I work on your engines? I’m the one who decides ‘crazy.’ Why do you think the captain’s crazy?”

Bill actually appreciated that, showing deference to his rank, and showing it to someone who wasn’t showing it. Will said “He wants to test pilot that Earthian piece of shit. If he dies...”

Ralph looked at Bill. “How dangerous is it?”

“I’m the only pilot.”

Then I’ll take it down,” said Ralph. “I’m a pilot. I learned how to drive the landing craft.”

“But the landing craft has completely different controls!”

“Doesn’t the Titanic?”

Bill’s jaw dropped. Walt had never seen a dropped jaw before. “I’ll pilot it,” Walt said. “I’m an engineer. I’m pretty sure that makes me more qualified than anybody but Joe, and he’s never piloted anything.”

Bill was defeated. But, he thought, they’re right. I have to get these people home, we already lost one old man. And he was the oldest, real time. Or maybe *normal* time. His time was

far from normal, even if he had eggs for breakfast at his normal time.

It was also normal for Joe to want to go along. But Bill was adamant. "I can't afford to risk both my engineers." Poring over the documentation, Joe discovered that he could have landed it remotely, but Walt was already halfway down.

Bill had cold cereal in his quarters as Walt test drove the Earthian ship to the planet's surface. It was a first, he had always had a hot breakfast. But he was still steaming over Walt being the test pilot. Jerry was in the commons, also eating breakfast.

But they all got over it, or they would have all been dead by then. But after landing, the Earthian ship never took off again, despite its capability to do so. Two centuries later it would be a tourist attraction, although no one could know it at the time.

The band only missed one Saturday, which was now moved to Sunday, the day that was now called Saturday because of the stupid time craziness. The ship's clock had reset itself and with it, all other devices, as knowing its exact distance from Mars, could compute the exact time. Not as exact as an atomic clock...

There were always a few landing craft setting down on on the planet every day, usually at least a dozen and a lot more on a Saturday night.

It was a lot later than anybody imagined. Years later. Almost nine years had passed on the ship, but over a quarter century on Mars. Bill had lived for sixty nine years, but the calendar said he was two hundred seventy five.

But time was normal again, if a little late. What wasn't normal was the outside. It was creepy out there, especially at night. But they showed up for the shows, especially since most of their jobs were on the planet. Most of them, anyway.

Two weeks after the first muddy boots, robots were printing printers to print houses with. Two days after that the first house was printed, then a house a day, complete with fusion/fission energy source, water, and waste disposal, all combined and self-contained.

Everyone was busy, except the formerly most hopeful of the scientists, the biologists. They had nothing to study after the first few weeks of putting soil and rocks under microscopes, and doing other tests. Now they were all bored.

A month later all but five of the houses were occupied. Jerry noted that the incidence of agoraphobia varied, but all seemed to have it to some degree, and one man, Edward Sanchez, who was luckily a biologist, had a terrible panic attack the first time he tried to see a musical performance. Harold had to have a robot sedate him.

Jerry had an epiphany—It wasn't just the crazy time warp that caused the Sirius expedition's members to become mentally ill, although that was probably the largest factor, but spacers' built-in agoraphobia from never being outside in their lives likely had a lot to do with it. He hurried to his office to report on it and start devising a study. He felt it in himself; the outside made your skin crawl. He shivered.

He dictated a few notes to the computer and called Jerry. He needed collaboration.

Aliens

Bill was troubled. After the ship had turned around, messages and news from the Solar team had become less and less abnormal and more and more late. After reaching Proxima the signals were normal radio, although they seemed to have come from the future. Actually, the messages were from the future but so were they, having traveled through time a lot faster than normal. The newest messages were also four years old.

But what troubled Bill as he did his normal morning pilot room duties was another signal, weird like a ship was transmitting while approaching incredibly fast. It would be the next day before the computers could translate it into sound and pictures. It disturbed him a little. Earthians? No, Earth was a shambles. Broken. It was impossible. Maybe non-human intelligent species from another star? Even though no alien life had ever contacted the solar system, and no one had found alien life before the Sirius expedition, were we alone? If not, was the alien life dangerous?

He finished his duties and went to the commons, both curious and slightly worried. Should he have the robots construct weapons? He would know after the radio transmission was decoded. As normal, the crew and passengers would be informed only if there was a need for them to know the information. Worry can be deadly, as it can lead to mindless panic.

He sat at the bar next to Jerry. Bill had forgotten that he and Ralph had access to all the information he had access to, as it had been almost nine years since the trip started, ship's time. After pleasantries, Jerry said "You look a little uneasy."

Again, Bill suspected mind-reading, one of the myths about that science. "No, not really."

“You’re worried about that transmission.”

“What transmission?” Now he was sure Jerry and Ralph could read minds. They couldn’t, of course, but psychologists were trained in the art of reading body language.

“The one from the ship that’s headed this way. Why are you so nervous?”

“From the signal’s frequency it looks like they’ll be here in a month.”

“So?”

“So what if they’re aliens?”

“What do you mean? Earthians?”

“No, inhuman people from another star!”

It was an effort for Jerry to keep from laughing, and he couldn’t help breaking into a huge grin. “Look, Bill, it’s not likely they would have developed the same technology as us.”

“Radio waves are radio waves. Earth is too poor to send probes any more and it can’t be from Mars. Look, don’t say anything to anybody.”

“Ralph has access, too.”

“Oh, yeah, I forgot you guys have full access. But I’m worried.”

“Outside too much?”

“What do you mean?”

“Agoraphobia.”

Bill rolled his eyes. “I grew up in Canada!”

“Don’t you live underground up there?”

“Up there? Huh?”

“Up on Earth.”

“Oh, it’s not like a spacer dome. Earthians go outside whenever they can. It’s just that nobody said anything about a second ship so it’s not from Mars, and Earth is flat broke so it couldn’t come from there.”

Joe was high and “walked” up on a cushion of air and sat down. It looked humorous. Walt had become the defacto leader planetside, subject to Bill’s orders. Joe was the only one in the band still living in zero gravity. Will spent most of his time in the mountains. Mike Walton, a biologist, was with him, wishing he had paleontology training but looking for anything

that looked like fossils, anyway, despite his lack of education in that field. He had books, but...

“What’s up, guys?” Joe said. He was in a really good mood, having come up from generator and engine inspections without having to climb stairs.

“We are,” Jerry said. “You guys play tomorrow?”

“Yeah, I’ll fly down after morning inspections. You going?”

“I can’t,” Bill said. “The ship needs a captain. I can see it in the commons.”

Jerry laughed. “I need to guard the nuthouse!” Joe laughed.

Linda Middleton and Mark Whitney were on the planet, mixing their own feces with dirt from Anglada and planting popcorn and ganja seeds. They’d had the robots construct an outhouse without digging a pit underneath to collect dung, then had the robots move the structure for further tests with fresh manure.

Mark said “Think they’ll grow?”

“No, there isn’t much carbon dioxide here. But we’ll see.”

They were in a patch of ground just outside Linda’s house. Mark lived in the Earthian ship, which had mostly stopped stinking after they aired it out in space before replacing the air. After reading the manuals, Joe had flown over and studied its engines and fixed its radios before Walt flew it down.

The ghost of Earth’s stench was still there, though. They washed up in Linda’s house, then Mark went home.

Up in orbit, Bill had finished breakfast, and when Joe lit a joint, Bill left and went to the pilot room and had the robots print out weapons, both projectile and energy.

Just in case. It would take a week.

The next day the computers finished decoding it. It was aliens.

Aliens from Earth.

“Attention, spacers: You are trespassing on our territory. We claimed the planet the day after we sent the

robot ship. Exit immediately or you will be removed.”

Bill was flabbergasted. What the hell? He started reaching for the phone to reply, but decided that in addition to weapons he needed a diplomat. As if on cue, the pilot room’s doorbell rang. It was Jerry. “Did you see...”

“Yeah, I was just getting ready to call you. Those Earthians are stupid.”

Jerry smirked. “How else could you ruin a planet? Of course they’re stupid. Let me talk to ‘em.”

“They’re still too far away, give it a week.”

“If we have to. We can’t let it stand, though. They don’t have ownership just because they say they do. They’ve never even been here!”

“Well, *Doctor*, I have a suggestion. Use your brain magic on ‘em. Scare the hell out of them, make them wish they’d stayed on Earth where they belong.”

“We’ll need weapons,” Jerry said simply.

“Already on it, had the robots start yesterday. We should be armed in a week. Robots down on Anglada are making even more.”

“The passengers will have to know.”

“The book...”

“*Fuck* the damned book! They didn’t count on interstellar war when they wrote that damned thing. People here will need to be armed.”

“I can’t agree to that, but we can set up a police force of sorts for the planet. Arming everybody is begging for trouble. You’re a psychologist, you ought to know that.”

Jerry looked sheepish, having let his emotions override his reason and training. “I do. But I worry.”

“We don’t need to tell the passengers yet. But get a speech together.”

“You should give the speech.”

“I agree. But you’re the shrink, you need to write it. Let them know without scaring them, it’s those skinny little Earthian bastards we need to scare.”

“Okay. I need coffee. And breakfast.”

“Me, too. I’ll go with you.”

As they floated down the hallway, an invisible light bulb lit brightly over Jerry's head, its brightness equally invisible. "Hey! I'm not going to talk to the Earthians, the computer is!"

"I don't get it."

"You want scary? How about if their message was answered by the voice of God, or since we want to scare them, the voice of Satan? You know how Bob sang in harmony with himself, sometimes with a female voice the first time he played? I'll talk to Bob and see if he can rig something with his equipment."

"Good idea, but I'll have to talk to Bob. Knowledge of the Earthians is still on a 'need to know' basis."

"I should be there, too."

"Yes, I think so. I need you!" He looked at his phone. "In his workshop." They went there, breakfast and coffee forgotten.

"Come in, guys, what can I do for you fellows today? Guitar lessons?"

Jerry said "No, we need your help with some electronics."

Bill added "This is secret, understand. We don't want to scare the passengers..."

"You just scared me!"

Bill sighed. "We don't want to scare the passengers *unnecessarily*. But we need your expertise. Can you keep quiet, or would you rather upset passengers?"

"Garlic radish! WHAT?"

Jerry smiled and said "Aliens are coming."

Bob's eyes got big. "Aliens? Space aliens from Andromeda? What kind of aliens?"

"Ones from Earth. They say they claimed this planet when they launched the robot and they want us to leave. I'm pretty sure none of the scientists want to. Well, maybe the biologists."

"Well, what's the plan? What do I need to do?"

The next night was Saturday (formerly known as Sunday), and Bob proved able to keep a secret, indeed, showing no hint that anything was wrong.

“Good evening, ladies and gentlemen! Tonight we not only have some songs you haven’t heard, but some brand new instruments. New to you, they’re centuries old!”

Nobody laughed, and Bob pretended not to care, pulling out his harmonica and starting an ancient blues tune about trains. This despite the fact that he had no idea what a “train” was. Later, Joe showed off his new cowbell with an ancient rock and roll song. Not being Earthian, he knew what cows and cowbells were.

There were only a half dozen people on the orbiting ship, the rest on the planet enjoying the show. Bill and Jerry actually got to watch from the commons for a change. Harold was watching it live, the first time in the expedition.

Bill hadn’t thought about what the passengers would think when seeing the robots constructing weapons, but it didn’t matter. Nobody noticed robots or had any interest in what they were doing any more than any other machinery, unless it malfunctioned.

The next day they sent their reply, in a voice from the depths of hell, seemingly savoring the terror it was inducing. “You err, Earthlings.” That’s good, Bill thought. Earthlings!

“We are Angladicans. We have colonized this planet and you cannot take it away. Return to Earth, puny little Earthlings! Or face the certain and slow, horribly painful death that you will beg for.”

MacPherson was terrified and responded immediately. “No! Please, I can’t! I have no control over the ship! It’s a robot! That was a recorded message. I don’t even want to be here!”

“How many crew?” Bill asked through the computer in the Satanic voice, surprised and amused. Good job on the voice of Satan, he thought. The poor fellow sounded scared half out of his wits.

MacPherson gave a nervous giggle. “Just me.”

“What?”

“Sorry, just me. I’m the only one.”

“How long have you been alone?”

“Uh, I don’t know. Eight years? Seven years? Twenty

years? What year is it, they said time would change.”

Jerry told him in his normal voice “Your government no longer exists.”

“What?”

“It didn’t as of fifteen years ago. Look, son, I can help you.”

“How?”

Bill said “Can you land?” also in his normal voice; Beelzebub was no longer needed, it seemed.

“Uh, they say it can land but I’ve never done it. It’s a robot ship.”

Bill said “We’ll send someone to pick you up when you reach orbit. Two weeks?”

“About that.”

“Okay, call us when you reach orbit.” He switched off the radio. “How about that?”

“Short war. They thought one guy could scare us away?”

“Apparently. Let’s get a beer.”

While on their way, Jerry called Ralph to inform him that the invasion had been called off, and the invader had defected. Bill got out his own phone and called everybody.

“Ladies and gentlemen, there is no cause for concern, but there’s a visitor from Earth on his way. He should be here in a week or two. Please don’t be too hateful towards him.” He then called Walt to have him greet the visitor in a friendly manner when he arrived. Not enough captains, he thought. He had to stay on the ship, and Walt had to stay on the planet, company rules.

He arrived the Saturday morning after next. Bill decided to have Joe be acting captain while he ferried the Earthian to the planet. Later, he realized he should have sent Jerry or Ralph.

It looked nearly identical to the Earthian ship on the planet, so getting inside was a lot easier than when they had entered that one. Knowing that this ship was occupied by a human, he didn’t bother with an environment suit as Joe had in the robot ship when he had repaired its radios.

When he landed in the Earthian ship and the pressure equalized, he opened the lander's door and wished he had worn a suit. God, but the stench was overpowering! The craft's air cleaner switched itself to its highest setting, and Bill felt like vomiting.

A door opened and a greasy little skinny man came out. Bill went to shake his hand, and the Earthian didn't seem to understand the gesture. "I'm Bill Kelly, captain of the ship that brought us here. I didn't catch your name."

"Oh, sorry, I'm Duane MacPherson."

"Nice to meet you, Duane, where are you from?"

"Earth."

Bill rolled his eyes. "Where on Earth?"

"Arizona, but I was born in Scotland."

"Really? I lived in Flagstaff for a few years back when I was married."

"You're Earthian? You don't look like it. How did you escape?"

"I was a GOTS captain before Earth was a dictatorship. It was founded by Earthians, you know."

"Really? I thought that was just false propaganda."

"No, it's really true. If I remember right, its founders were from Illinois."

"How can you be sure?"

"I told you, I've been in space since ships' generators were fission!"

"How can that be? You would have to be..."

"About two seventy five maybe, I haven't done the math since we got here."

"But how... how can you be that old?"

"Didn't they tell you about time dilation?"

"Only a little and I didn't understand it."

"How old were you when you left?"

"Nineteen. No, twenty. I think."

"You're around forty or so now, depending on what year you left and how fast you went. I've been captain most of my life. I'd be dead if I'd stayed married, but went back to space."

“Do all you spacers live that long?”

“No, the life expectancy is ninety five, but that’s stationary years. I’ve only physically experienced about sixty eight or nine years. Are you still getting reports from Earth?”

“No, and it has me worried.”

“I guess so. You didn’t know your civilization collapsed?”

“No! How...?”

“Pandemic killed three billion people. The last billion would have died were it not for us spacers. I just saw the report a couple weeks ago. It’s been at least fifteen years, stationary time. Space medicine and surplus space tube food kept the rest alive.”

“Is there any way to find out if anyone I know survived?”

Bill shook his head. “A message takes four years, one way.”

Duane looked like he was fighting back tears. Bill said “Did you ever hear real music?”

“Well, sure, I have a computer.”

“No, I mean *real* music, played on actual instruments by human beings like they had before computers were invented.”

“It doesn’t exist.”

“Bet on that and you’ll lose.” He landed thankfully and was in as much of a hurry to get out of the lander and its stench as he had been in a hurry to reach the surface. “Leave that door open, okay?”

He introduced Duane to Ralph and Walt, and showed him one of the new houses the robots had built, especially the bathroom and how everything in it worked, because Earthians stunk! At least this one did. As diplomatically and tactfully as he could manage, he said “Welcome to your new home! I’ll bet you can’t wait to get cleaned up. We don’t want to stink up your new house, I’ll wait in the living room. Oh, what size clothes do you wear? I’ll print some.”

Bill didn’t know that there had never been modern looms on Earth. Duane stood there with a puzzled expression on his face as Bill went to the living room.

After Duane had bathed and donned his new duds, they went for lunch to the restaurant that the robots had built when they were building houses. The fancy sign read “The Commons.”

They went inside and sat down, and holographic menus appeared. “I don’t see the limits,” Duane said.

“Limits? What do you mean?”

“The ration.”

Bill was flabbergasted. “No rations, take what you want.”

“Really? As much as I want? No rations?”

“Nope.”

Although there were no robots in eye shot, Bill said “Robot: pork tenderloin, green beans, corn, mashed potatoes and gravy. What are you having?”

“What you are, I guess.”

“Robot, make that two identical orders. Do you have any skills, Duane?”

“Not really, I joined the Space Force right after high school.”

“I’m just a high school grad, too, but most of the people on this planet hold PhDs.”

A robot brought their orders. After a single bite, Duane’s eyes got big and he said “Wow! What IS this?”

“Something wrong with it?” Damn, did the machinery break down?

“No! Damn, I never tasted anything this good in my life! Uh, why are there so many PhDs?”

“We’re a science expedition like you used to have on Earth. Where do you want to go when we get back? Surely not Earth?”

“Why not?”

Bill was flummoxed. “You don’t mind dictatorship and crime and hunger and the rest of the nonsense on Earth?”

“I’ve heard stories about how bad the spacers have it,” he mumbled through a full mouth.

Bill laughed. “Son, you sure got a lot to learn! Those damned people filled you poor souls with so much bullshit it’s

coming out of your ears! I'll have Jerry show you the history library, it's on every phone and tablet, even walls if you want it there. I asked about skills, but you really don't need any."

"No skill needed for a shovel, eh?"

"Shoveling is for robots. There's no forced labor in space, we get a paycheck from the government. You get extra if you work, and after you turn sixty. You have to retire at sixty. Hey, are you okay?"

Duane's head was spinning. You don't have to work? and... "Yeah, this is, uh, kind of unexpected. What's 'retire'?"

"There aren't enough jobs for everyone who wants one, so you're not allowed to work past age sixty. That's when you have to retire, and your government check gets bigger."

Duane was dumbfounded, and looked it. Bill took out his phone and called Ralph. "Can you meet us in the EC's bar?" he asked, referring to the entertainment center. This certainly called for a psychologist. He really should have sent Ralph to meet Duane.

After talking to Ralph, he told Duane "I think you'll like our entertainment center. Oh, don't cross any red lines, you'll bump your nose."

They got up, having finished their lunch, and went to a different part of the building and sat down at the bar. Bill said "Robot, two Knolls lagers. You have anything like this on Earth?"

"I don't think so."

"You have holograms?"

"Yeah."

The robot brought their beer. Duane said "On Earth we have human waiters."

"Yeah, on Mars and the asteroids, too, but there were only a limited number of passenger slots on our flight. Most waiters and bartenders only do it for a little extra money, anyway."

Duane sipped his beer. "I never had anything like this before!"

"You never had beer?"

"Never heard of it."

“They don’t have beer on Earth?”

“Maybe for rich people, I don’t know. You folks seem to live like royalty.”

“Well, your planet is a dictatorship. Was, anyway, when you left. When you have dictators, you have peasants. I’ll bet your president has all the beer he can drink!”

“Well, it’s pretty obvious he has all the food he can eat, he’s almost as fat as a spacer. No offense.”

Bill grinned. “None taken, skinny!”

Duane laughed. “Not for long,” he said, holding his belly. “I’m stuffed. I’ve never been full before. I never imagined there was such a thing as being *too full*, or that it could be so, uh, *uncomfortable*.”

Just then Ralph walked in. “Hi, Ralph. Duane, you met Ralph, right?”

“Yeah. Hi, Ralph.”

“Hi, guys, what’s up?”

“Duane is really confused by everything, it’s a different world to him. I was going to show him our wall. They don’t have anything like this on Earth.”

“Well, we have holograms.”

Bill just smiled and did something on his phone. “Let’s go see some music.”

Ralph said “Sounds good to me.”

Duane said “See music?” Ralph and Bill just grinned. They all sat at a round table near a curtained wall. A robot brought Ralph’s beer.

Bill said “Robot, play last Saturday’s show.”

The curtain rose, revealing three tables like the one they were sitting at. The one to the right had two people sitting at it, there was a restroom sign to the left, and a stage with the band on it behind the tables. Duane said “Excuse me, I have to piss” and stood up.

Bill said “Robot pause. Duane...”

“OW!” Duane said very loudly after walking into the wall, whirling around and holding his face. Bill said “Are you okay? I told you not to cross any red lines!”

Duane hadn’t noticed a thin red line at the base of every

wall, and right before where the curtain had been. Harold came in. He had spent his time on the planet, where the scientists worked and most people were living. Bill said "Hi, Doc. This is Duane, he bumped his nose."

"I'll bet that hurts. Here," the doctor said, putting an instrument on Duane's forehead. "Leave that on for half an hour. You can wash up if you want."

The doctor had caught the alien red handed; red with his own blood. Duane said "Did I just try to walk into a hologram?"

"Yeah," Bill said.

"Wow, Earth's can't hold a candle to yours. You can tell it's not real there. Where's the real rest room?"

That evening Bill was back in orbit, because space ships need captains and bands need musicians. Duane met the band by the real stage.

"I saw last week's show, was that real?"

Bob said "What do you mean? It was a hologram."

"No, did the computer make it?"

Bob looked surprised. "No, it's a recording of last Saturday's performance."

"That was really you guys? You can really do that?"

Will laughed and picked up his guitar and started playing the tune he had originally played for Bob eight years earlier, thirty years in the past.

"Hey," Duane said, "I recognize that tune but I don't remember it sounding that good!"

Will stopped playing and smiled. "Thanks!"

Bob lit a joint, took a toke, and passed it. Duane said "What the hell? What's that?"

Bob let his toke out and coughed. "You don't have ganja on Earth?"

"No," he said, marveling at the smoke going into the ash tray as if it wanted to.

"Want to try it?" Bob asked.

"Well, I don't know, why?"

Bob smiled. "It gives you a whole new perspective on life, and since you're from Earth you could probably use it."

“Let me pee first,” Duane said before getting up and falling down. “What...”

“Oh shit,” Ralph said. “He’s drunk. My fault.” He called Harold. “Could you send a brain stabilizer to the EC? I have a drunken Earthian on my hands.”

Doc came in and held a device to Duane’s forehead for a minute while looking at his tablet. “Look, Duane, don’t drink so fast.”

Alcohol and muggles were both brand new to the little Earthian, who seemed like a child to these elderly spacers. He was only about twenty eight, biologically.

He felt like a child around these big old geezers. He went to the rest room. When he got back, Bob had a full bong and a “Farstik,” a brand of bong lighter that looked like an antique wooden kitchen match. “Here,” he said. “Hit this when we start playing.” He hit it once himself, showing Duane how, then refilled it.

“Just hit it once,” Ralph cautioned.

By then the place was filling up nicely and the band got on stage. Bob started the show.

“Good evening, ladies and gentlemen. Our first song is an ancient tune called ‘Bad Moon Rising.’ I have no clue what a bad moon might be, Phobos, maybe?” A few in the audience laughed.

Duane held the lighter by its ignition points like Bob had showed him, and a flame appeared at the end. He hit the bong and instantly began coughing and wheezing, tears in his eyes. Ralph laughed. “Dude, not so much, these guys are used to it.”

“Wow!” He started coughing again. The song was over before his coughing fit was. “Robot! Beer!”

From the back of the room someone yelled “Packle!”

“Bang boom boom bang, boom boom boom bang boom boom bang, boom boom boom, bang, bang bang bang bang bang” Joe’s drums sang, followed by Bob’s and Will’s guitars, then Sue’s voice.

When the show was over he was drunk and stoned and had enjoyed the first good time he’d ever had in his life, with

the possible exception of his honeymoon. He felt sorry for his fellow Earthians.

Ralph helped him home and hoped he hadn't picked up a problem. He needn't have worried, Duane's entire experience was unbelievable to him. To Duane, Anglada was heaven.

Anglada had everything except the alarm clock he hated and the woman he loved.

The next morning Bill was in the pilot room, and there was another radio signal that appeared to be approaching at very high speed, fast enough that the computers would have to decipher the message. More Earthians? Betelgeuse aliens? He would find out the next day. What ever, he was now armed and ready, thanks to Duane and the Earthians' threat.

Joe went to the commons with Duane to have some breakfast before flying to the Titanic. There were quite a few tables with people eating breakfast. Duane had overdone dinner the day before, as he had overdone lunch (and drinking and partying in general), and was determined not to overdo it again this morning.

They sat at a table. The menus appeared, and Duane had never heard of any of the items on the menu and just stared at it. Ralph was reading it, but Joe was ignoring it. "Robot, ham and cheese omelette with a side of hash browns, buttered toast and raspberry jelly, black coffee and ice water."

Ralph was still studying the menu. "I can't decide what I want."

Duane mostly parroted Joe's order, substituting Knolls lager for water. Ralph looked up from his menu. "Bad idea, son."

"Huh? What?"

"Beer in the morning. You have a lot to learn, there isn't any beer on Earth, is there?"

"No."

"Look, Duane, no more beer until you learn about it, okay? And none before noon! Robot, I'll have what Joe's having but hold the potatoes."

Duane said "Uh, thanks, I guess. Robot, cancel beer and substitute ice water."

Jerry looked pleased.

After breakfast Duane flew to the ship with Joe, who had to do engine inspections. Doc had, of course, given Duane a hangover remedy for the morning. The ship was home to Joe, and its engines and generators were his babies. Joe went downstairs, and Duane met Jerry, who gave him a tablet, showed him how to control wall shows, and how to use the library. He hadn't checked the ship's logs, but down on the planet Ralph had. He was as worried as Bill.

The next morning when the message was normalized, both were relieved that their worries were unwarranted. "Star Ship Titanic, this is the Star Ship Martian Glory with news you may not have known since you have decades to go through, but radios aren't limited to the speed of light any more. These new ones came out right after you left Mars, you probably weren't even past the heliosphere. However, both ends of the conversation need the new radios," the voice said, neglecting a very important fact these pioneers would discover on their way back to Mars.

Bill paused it to think. How could photons be convinced to break the speed of light? Unable to wrap his head around the concept, he hit play, to be informed that it worked on the principle of paired electrons, where the spin of one electron showed the spin of the other, no matter how far the two electrons were separated. They had paired photons back in antiquity, and it was still only a century after paired electrons were discovered, and they had to work out a way to tell one of quintillions of electrons from any of the other quintillions, but they had managed. Not only was it not hindered by speed limits, it was impossible to eavesdrop as was the case with radio, which this acted like but wasn't. It was Einstein's "spooky action at a distance." There were no radio waves involved, no photons, only paired electrons and the parts and wiring that controlled and read them.

The message also warned of a warship from Earth that had left with a platoon of soldiers a month earlier than they had. They were most likely talking about Duane, Bill figured. This was the same bluff Duane's ship used, the poor kid.

The Martian Glory was in orbit a little more than two weeks later with several dozen soldiers, all ready to fight in the galaxy's first known interstellar war. Joe fetched a new "radio" from there and invited the Glory's crew to the planet for a music concert. Even in space, concerts were unknown. Jerry had the idea that Bob was going to change that.

Joe then flew down to the planet, taking Duane with him, then Will flew back in the same lander to talk to his grandson. He had been four when he had spoken with him face to face eight years ago. He'd be thirty or thirty one now.

"Grandpa! I haven't talked to you directly since I was a little kid! Are you okay?"

Far from the bald faced child Will remembered, Billy was a fully grown bearded man. "I couldn't be better," Will answered. "Especially talking to you. It's been about nine years since you were a little kid!"

Billy laughed. "My oldest is almost a teenager!"

"Really?"

"Yep!"

Later on the planet when another communication tablet had been brought down, Duane was in Ralph's office. "But you have faster than light radio!"

"Well, it's instantaneous but there's no speed involved and it's not a radio. They're built in pairs. But I'll see if anyone from the Solar team can find any information for you. Earth has gotten pretty primitive, they tell me."

"I worry about my wife. We were only married six months."

"It's doubtful we'll find her, it being Earth and all, but give me her name and any other identifying information and we can at least look. But if we do find her, will you want to go to Mars?"

"I want to go wherever she is."

"After we finalize your Martian citizenship, she'll automatically become a citizen of Mars since she's your wife. If we find her, she can go to Mars. Let's start working on those papers."

Shirley MacPherson was thirty nine and had survived the pandemic, unlike most of the people she had known. She had lived simply, on the vegetables she grew on the roof of her underground hovel, and the tubes of space food from Mars. At least the weather wasn't as bad as it had been when she was young.

She smiled at something her neighbor said the day before. It had Shirley laughing until she was wiping tears, and then some. Agnes had said "At least we don't have to work any more!" Hilarious because they had to work constantly just to stay alive, and not get a paycheck any more. Not even Duane's paychecks, they had stopped during the Great Collapse.

Earth had gotten to the point that the Amish had better technology than the largest North American nation-state's government. The underground transports had stopped decades ago. What's more, the Amish had the only healthy earth, as they had preserved it. Earth was poor. Earth was the third world, with the uninhabitable Mercury and Venus the first two. Civilization was the "little worlds".

And Earth was sick, maybe dying. Various governments had reassembled with the help of the spacers, although not always in the same shapes or with the same names.

She had left Arizona after the money stopped, and had kept all of Duane's paychecks in the bank until it looked like everything was going to collapse, and bought precious metals with it. Of course, with a collapse like that, even the metals became worthless. You can't eat silver and gold, which were only valuable on Earth, anyway.

She had remained married to the missing Duane, but settled in the Republic of Dakota. Arizona had become unlivable, and was now a wasteland. There was no life in Arizona at all. Dakota seemed to have fewer storms than other places, or so she read. You still had to live underground, especially if you wanted to eat. After all, you have to have somewhere to grow food, and most of the dirt was ruined, completely sterile, and you had to cover the real dirt with a substitute soil. Earthians were even skinnier now than when Duane left.

They would never tell her what his assignment was, where he was going, how long it would be. "Top secret" was all they would say. She wondered if he still cared. She wondered if he was still alive. She wondered why she still bothered wondering after all these years. But she still loved him dearly and missed him terribly.

Then one day the triple thump came at her door. The Dakota Government? What would they want with her? She climbed the steps and opened the above ground door. It had a small foyer with solar cells on its roof, with gutters to catch water for the cistern. A man in government garb and its distinctive red and black hat stood there. The hat clashed with his red beard. "Yes?" she inquired.

"Mrs. MacPherson?"

"Yes?"

"Mrs. Shirley MacPherson?"

"Yes?"

"Do you have chairs? May I sit down?"

"Oh, certainly, I'm sorry, how thoughtless of me," she said, detaching two chairs from the door and unfolding them. "Mister...?"

"Armstrong, ma'am, Neil Armstrong. I'm from the Department of State. You're married to an Airman First Class Duane R. MacPherson from the old empire's space force?"

"Why, yes, is he dead?"

"Ma'am? Uh, why no. He's..."

"He's where? Is he okay?"

"Yes ma'am," the government man said, taking a device out of a satchel. It was a flat thing with a transparent screen, behind which appeared another three dimensional space, with Duane's youthful face filling part of the space. She put a hand to her graying hair. "Duane? Is that you? Are you real? How are you so young?" She felt very self-conscious, here decades since they were nineteen and he was still young. Not nineteen, but young.

"Sweetheart! God, but I missed you, especially on the trip, eight years all by myself!"

"Duane, you've been gone twenty." She became angry

as well as puzzled. What the hell was this nonsense? “Where did you go? Where the hell are you?”

“Anglada.”

“Where’s that, Africa?”

“No, honey, I’m four light years away on Anglada, a planet orbiting Alpha Proxima.”

“Another star?”

“Yes, the closest to the sun. I only got here a few weeks ago. Honey, I wish you could have come, this is heaven. But maybe Mars is, too.”

“Mars?”

“They tell me it’s even better than it is here! It’s hard to believe. Nobody has to work unless they want to, there’s plenty of food and really clean water. Food like I never tasted before, food from heaven! Food that made everything I ever ate before taste like rotten garbage! And as much as I want! They gave me a house here but I can go to Mars if I want.

“I wish I could!”

“Ma’am?” the government man interrupted. “You can. Your husband is a Martian citizen now, and an Angladican colonist. You’re free to go to Mars if you wish, since your husband is a citizen. Do you have any family on Earth?”

“They died in the pandemic. Most everybody thought that the spacers wanted to inject us with poison like the government said, but you could see that the ones with the injections didn’t get sick. The empire was stupid and evil. Duane said there’s all the food I want?”

“Yes, ma’am.”

“When can I go to Mars?”

“Any time you want.”

“Oh, God, now?”

“Yes ma’am.”

“Duane? Did you hear that?”

“Yes, dear. We’re going home!”

The government man said “You’re going now?”

“I have nothing and no one here. Let’s go!”

“You’re not taking anything?”

“No. I’m wearing my ring.”

“Surely, you jest.”

“No, Neil, I’m serious. Let’s go to Mars.”

She and Duane talked for a long time, then disconnected at the same time, if time has any meaning at all. Just say simultaneously.

Duane looked up at Ralph. “Can I go to Mars now?”

“After the last of the paperwork to cement your Martian citizenship you can take your ship there, yes.”

“But it’s a robot!”

“Talk to Joe, he got all the manuals from the other Earthian ship and studied them, and can get the documentation from your vessel, too. I’m sure he can reprogram it.”

All of a sudden it struck him how lonely he had gotten during his trip to Anglada and how welcome being around people again was. “Uh... can anybody go along? I almost went nuts all by myself on the way here.”

“Well, everybody’s free, nobody’s a captive here, but they all have projects... you know, the biologists aren’t doing anything. I’m pretty sure one will want to go,” thinking of Ed Sanchez, the fellow with the acute agoraphobia. “The other biologists may be bored, too. Put up a flier in the commons advertising rides home.”

“How do I do that?”

“Talk to Bob or Mary, they’ve both posted fliers. Bill could, too, but the poor guy’s the busiest person on the expedition. But you should make sure you can actually fly that thing home before you put up any fliers.”

“I’ll talk to Joe.”

Down on the planet, dozens of elderly scientists were young again. Will had started a number of papers, and Linda’s garden finally sprouted, after she had the robots make an outhouse into a greenhouse. Expected, where there’s no carbon dioxide there’s no plant life. Of course Sue, the agronomist who considered herself a farmer, was incredibly interested in Linda’s work.

Linda had put a large bowl of vinegar in the middle of the greenhouse and poured an eighth of a kilo of baking soda

in it, and the popcorn and ganja were thriving. Mark and Linda had proven that agriculture was possible on Anglada, as long as it was in a greenhouse with carbon dioxide and there were some feces mixed in with the soil for the needed microscopic organisms.

“We need some cows,” Sue thought. But domes would have to be built first. Cattle need oxygen. They had also made all of them colonists by growing crops, even if the crop was only popcorn and muggles.

All of the other scientists were having an equally rewarding time. Except, of course, for the bored biologists who had, all but Linda and Mark, already finished their short papers and sent them up to Mars.

Edward was finished as soon as he had first reached the planet. Jerry feared he would never get over it and doubted that once on Mars he'd ever leave again. He started thinking of ways to test for agoraphobia on Mars, or any other world where everyone was inside all the time.

He worried about what would happen on the Earthian ship, but it now had two of the new “radios,” one paired with Mars and one with Anglada. He didn't yet know that the new communications devices wouldn't work at all while traveling at interstellar speeds.

The Martian Glory had returned to the solar system, its secondary purpose of delivering interstellar communications completed; its primary purpose had been the interstellar war that ended before they arrived.

Now any new discoveries or inventions could be sent to Proxima immediately. With fusion physics and atomic and molecular printers, any new device could be built. All it needed was a pattern.

A day later on Earth, Shirley boarded a GOTS spaceplane to the ship that would take her to Mars.

Orbiting Anglada in the Titanic, Joe had reprogrammed Duane's craft remotely, thankful that he didn't have to smell its stench. He had worn an environment suit when he had repaired the radio. All of the biologists except Linda and Mark went to Mars with Duane, everyone else remaining on Anglada

or in orbit around it.

Mary left for Mars with the other biologists. Jerry's treatment had made a new woman of her.

Joe remotely opened all the Earthian ship's vents and hatches to let all the vile air out of the craft, then closed them all and started an oxygen generator separating water into oxygen and hydrogen, while the fusion generators produced clean nitrogen from the hydrogen. The ship was ready to leave a day later, the people a day after that.

Joe ferried them to their ride home; at least, home to the solar system. This included the newest Martian who had never been to Mars, and some from asteroids.

Everyone lit doobies before Joe opened the doors, to cover the remnant of Earth's stench. They had said their goodbyes in the Titanic. Joe shook hands with everyone and went back to the Titanic.

The Journey Home

When Shirley embarked on the space ship to Mars from the landing craft, she went straight to the commons. She was still hungry, and ordered far more food than she could possibly consume. Of course, they would have to leave orbit before they could prepare it; she didn't want any more Martian tube paste space food; the Martians had donated much of it to ease the Earthians' hunger. The weightlessness gave her the dry heaves; she, like almost all Earthians, had never left Earth in her life.

Of course, when her first non-Earthian meal arrived she made the same mistake her husband had made, eating so much it made her stomach hurt. Like Duane, she swore that wouldn't happen again, then ate way too much again the very next meal. She couldn't believe how good real Martian food tasted. Even the space paste tasted better than the old imperial food before the Great Collapse, and the vegetables she had grown in the artificial soil all had a metallic taste.

The spacecraft from Earth to Mars left orbit about the same time as Duane's ship left Anglada's orbit. Edward was the only one subject to space sickness, but the bags were always handy on any ship that subjected people to zero gravity. Even some veterans got sick once in a while.

Unlike the trip to Anglada, the trip home in Duane's Earthian ship was spartan for the spacers. They had completely stuffed two decks with frozen food and a third with water ice, but missed the high resolution holograms, the commons, and all the other niceties spacers were used to that were completely foreign to Earthians. Niceties like a physician for these elderly scientists, most of whom would be well over a century old when they reached Mars.

The people from the Titanic had been on Anglada for five months when the Earth vessel began its return to the solar

system. The scientists were having the time of their lives doing what they loved most: science.

Mark and Linda seemed to be becoming an item, both having been widowed before leaving for Anglada. It was the main reason both had for leaving, wanting a new, useful life. Six months later they asked Bill to marry them, and he was more than happy to oblige. This is lots better than fighting pirates and putting up with rich assholes, he thought.

As there was no rice, they threw popped popcorn; already popped because a corn kernel hitting you in the eye would really hurt. They didn't know that in the future, throwing popcorn at the bride and groom at weddings would become a tradition on Anglada. Of course, it was the first marriage with live music in centuries. Almost nobody in the solar system had ever heard live music anywhere but on the Titanic, and Anglada was the only place to hear live music in the Centaurian system, mostly because it was the only place there with people.

A little more than a year after they were married, it was time to return to Mars. They decided to stay on Anglada, as when they had been married for six months, someone ran across a store of seeds the biologists had brought, and left behind on the Titanic when they went home on the Earthian ship. Sue decided they needed an agronomist and stayed as well, as did about two dozen others. The band would miss their flute player. How could they play Stairway without a flute? Or Moondance?

Another ship left Mars for Anglada about six months after the Titanic had arrived, carrying live cattle and hogs, and foolhardy young people who weren't afraid of insanity and intended to stay on Anglada. Many of these were the Vestans who began the project in the first place. One was Peter Knolls, a descendant of the famous Captain John Knolls, who still held the record for number of dead or captured pirates over two hundred years later. Peter was one of the wealthiest people in the solar system. Here, he was just Pete. Pete never met his ancestor's best friend, Bill Kelly.

This time there were only a couple of scientists, three

captains, three electrical engineers, two psychologists, the aforementioned few dozen foolhardy people who were sick of modern society, and no musicians. That would change on future trips when travelers would watch holos of the Titanic band.

Robots would be building Martian-style domes for the cattle; the domes should be finished long before the cattle arrived.

The band would be returning to Mars, except Sue, who had decided to stay, and none of the other band members or anyone else could get her to return home. Saturday nights wouldn't be the same, and it wouldn't be Saturday any more, because it would be changed to a different day of the week once they were back on Mars. Sue did continue flute recitals on Anglada Saturdays, wishing she still had a band backing her up.

Walt rigged up a clock that showed the time and date onboard alongside another one that showed Mars' time. Before they reached Proxima's heliopause the numbers on the Mars clock were spinning too fast to see, and they discovered that the new communications simply didn't work past a certain speed; the paired electrons changed together, but the equipment couldn't keep up. After two weeks they were back to old fashioned radios again.

The Angladicans would be vegetarians after about a decade, as that's all the frozen meat they left the colonists. They might actually live long enough for another steak after the frozen meat was gone, but they were elderly and might not live that long.

When the unnamed Earthian ship was about halfway to Mars, everyone but Duane was shocked and frightened when they were suddenly at zero G, followed by a banging sound, followed by the ship jerking and gravity quickly returning. It had scared the hell out of Duane when it had happened on the way to Anglada.

He couldn't ease everyone's nerves with a ship-wide announcement as Bill could have, because his ship was designed for only two people at a time; robots had added beds

and other necessities before they left.

The scare gave Mary a heart attack. Had Harold been there she probably would have survived, but the robots couldn't save her. Three more biologists' biology would come to an end before they reached Mars in about three more years, ship's time, as well.

It was already ten years later on Mars. Shirley had settled down in a nice little two bedroom house, still waiting for Duane, who should be home to a planet he had never stepped foot on, in a year or ten depending on your perspective. She actually had no idea how long it would take.

On the Titanic, the band had just played their last number of the night, or what they thought was their last number, a brand new song that Bob had just written that nobody but the band had heard before. People were yelling "Rock and Roll!" and "Stairway!" and "Encore!"

They played another two songs and shut off the stage lights and sat at a table as a four armed servebot brought beer. Someone yelled "Packle." Joe grinned and softly said "Sorry, dude, show's over."

Harold had missed the entire show, treating a stroke, a heart attack, and a heart failure in three of the scientists seemingly all at once. All three had happened within a half hour. None survived, the funerals all being held the next day.

Ralph had stayed on Anglada. All of the people who stayed there eventually died there, but not many before more ships came with more people, this time with most of them being young.

The robots on Anglada built a fusion generator that produced both oxygen and carbon dioxide. In another century people and plants would be able to breathe outdoors. Fear of the outside morphed into fear of forgetting one's mask, but everyone in the first voyage there would be long dead before no mask was needed.

The time to turn the Titanic around came, and by then Bill was used to the smokers. He announced the loss of gravity with "Ladies and gentlemen, we will be experiencing a brief period of weightlessness in about ten minutes. Stoners, zero G

is coming up, be prepared!” They were thankful for the heads up and got as loaded as they could before they lost weight.

Doc Guisewild was in the commons and suffered a heart attack, which was a big buzzkill, completely ruining the moment despite the fact that there’s nothing anyone but the Doc and his robots could have done. Everyone forgot the party and worried about Harold, despite being powerless. No one could even move without propulsion; not to help someone, only to go to a different part of the ship.

He had to operate on himself, thanking God although he didn’t really believe in Him, and had robots do the actual operation. It was a simple procedure that implanted a stent in the affected artery, which would dissolve after the damaged artery had fixed itself. Salter had been an exception, he had been physically close to life expectancy, but a younger man would have survived easily. They were working on growing limbs for amputees, despite how good computerized prosthetics had gotten. Harold wondered how long before he could grow a new heart?

Jerry wondered if Doc had been taking his own dietary advice. But the party was over and they would just have to wait for orbit around Mars for another weightless high.

Doc was on duty the next day, a bit sheepish, in a wheelchair. He wished he had left the commons before the pain got too bad so it wouldn’t have spoiled anything for anyone. He was not looking forward to therapy at all, but would be awfully glad when it was finished.

Saturday few showed up for the concert. Everyone seemed to have the boredom blues, Jerry saw, and decided to do something about it. First he consulted Bill, who thought it hilarious and wholeheartedly endorsed the idea. Then he talked to Bob. “Jerry,” Bob said, “That’s great! You’re a born showman!”

Jerry let the rumor go that the band was going to do something obviously impossible, like a musical magic trick. “I really don’t know what’s going on, I only overheard it. But it’s a *secret*, don’t tell anybody, now. *I’m* not even supposed to know, so you didn’t hear it from me!”

He only mentioned it to four people, but he could have stopped with Mrs. Harrington. She had been more responsible than Mary for spreading Snap the Packle. The rumor had all week to spread; Jerry had mentioned it to Mrs. Harrington on Sunday shortly after talking to Bill and Bob.

Even Jerry couldn't figure her out. He was glad she wasn't mentally ill. Except for after Mary taught her how to play Packle she had spent most of her time alone. But her work, Jerry thought, had been incredible. She was autistic like many of the scientists and a wizard with numbers.

Saturday night came and it appeared that Jerry was a wizard with minds, even if he couldn't figure Mrs. Bertha... wait, he can't call her that in public. But the commons was filling up nicely, whether from the rumor, boredom, or who knows what.

Jerry walked over to the table by the stage where the band was. Joe said "We're going to tell the audience you're a magician."

"What?!"

"Well, you're behind the magic in this show aren't you? We'll explain it afterwards so they'll know everything's okay and your magic is fake."

"Well, all right, I guess. People already think I'm a magician. I guess it won't hurt too much."

"Packle!" someone yelled from the back. Bob said "I guess that's our cue."

"No it isn't," Will said. "Give me that bong."

"Okay, one more hit and we're up." They all hit the bong and got on stage. Bill was in the pilot room with the stage showing on his screen and the audio playing.

Bob said "Good evening, ladies and gentlemen. Tonight we have an especially *magical* performance for you. But first, we're starting with *Stairway* like we always do. I'm surprised you're all not tired of that tune but the one time we didn't play it, well, sorry again that we don't have a flute player any more." The guitars started.

"There's a lady who's sure..."

When he sang the word "heaven," Bill lowered the

thrust almost imperceptibly, for a second, than back to normal. When the song was over, Bob loudly said “Y’all want to get high?”

The audience reacted appropriately. Bob started singing, “Well, when I met you at the station you were standing with a bootleg in your hand...” Bill lowered thrust a little. At the word “high” he cut thrust in half, then quickly restored it. They followed with *Strawberry Fields Forever*, and gravity lightened when those words were sung. Then they played *Rock and Roll*, followed by *Whole Lot of Love*. When the psychedelic part of that song came, Bill removed all thrust, suddenly.

The drums were magnetic, of course, but without gravity all that Joe could do was make noise, not actually play, but nobody seemed to care. When the psychedelia was finished, Bill added enough thrust to keep the musicians grounded. When the song was finished, Bob said “But folks, he ain’t heavy.” Then the song “He Ain’t Heavy, He’s My Brother” began. Bill added more thrust.

The next song started, this time Will singing “I pulled into Nazareth, was feelin’ ‘bout half past dead.” When he got to the part that went “you put the put the load right on me,” Bill increased the thrust. The audience seemed to enjoy it immensely. This was like a musical roller coaster.

Bill was very surprised. He’d had it all the way to two gravities and the asterites didn’t even complain! Of course, it had been years since they had been home. When the show was over, Bob said “Thank you! Please give a round of applause to the magicians, Doctor Jerry Morton and Captain Bill Kelly!”

Quite a few voices yelled “packle” and nobody was even playing Packle, with a few voices yelling “Encore” and “More.”

And the band played on.

Three days later Bob was looking at a tablet when they were supposed to be practicing, and said “Damn. I went all the way to another solar system to get away from being famous, and here I’m famous again. So are you guys. Look at this, it’s about the holos we sent back and everybody wants to see this strange new thing, music played and sung by real human

beings live. They're calling us "The Titanic Band."

Will frowned. "I don't like it. How about Bobby and the Titanics?" Bob laughed. "Or Willie and the Poor Boys!"

Joe said "Screw that Titanic nonsense, how about..."

"How about handing me that bong?" Will said.

On the Earthian ship, already inside the heliosphere and even almost as close to Mars as Neptune, Duane was startled by the radio beep, the beep that was a voice signal from another ship compressed by the relative speeds of the two craft. Pirates? The computer said it would take an hour to decode, and the ships would meet in two days. All he could do was sit and worry.

It had been a lonely, boring trip. Sylvia wondered how Duane made it to Anglada by himself without going stark raving bonkers. The few fellow passengers were better than no company at all, she thought, although there had been a lot more bickering going home than going to Anglada. It was too bad the new communications devices couldn't work when they were at interstellar speeds. She would have liked to let Jerry know that loneliness and boredom were also contributors to the Grommler insanity.

She would have to call him when he returned, or better yet, call the institute on Mars when they returned.

Ten elderly spacer biologists and one young Earthian soldier had left Anglada. Six would land on Mars; there had been five deaths. Besides Mary, three other geriatric biologists had met their maker, two of them amazed they had lived so long. Edward had committed suicide, hanging himself. The Earthian ship simply wasn't as advanced as the Titanic. It couldn't, for instance, do any better than three quarters of a gravity, but in less than three weeks they would be landing on Mars. The asterites would have to obtain passage to their respective worlds unless they wanted to emigrate to Mars, but it would be set up by the Anglada Institute, as the study had become known.

The computers finally untangled the message. "Unnamed Earthian ship, this is Captain Ramos from the GOTS Security ship Morning Star. Welcome back to civilization,

folks. Please respond when communications are better.”

Duane was more relieved than he could imagine. A day later they met the security fleet, who escorted them the rest of the way to Mars.

They reached Mars a week later, and Duane was amazed that it landed itself on the planet, right next to a dome. They would fly two landing craft to inside one of the dome’s huge airlocks.

Sylvia had never been on Mars before but was still shocked at the changes; she had seen videos, of course. The Valles Marineris had melted, or rather the ice that was put there before any of them were born that had been still frozen solid when the Titanic left had melted. She wondered what changes had taken place on Pallas, where she was from; she had never been closer to Mars than in orbit before going to Anglada. She thought about staying here on Mars; this dome is a lot better than the one on Pallas, she thought. Or at least the one that *had been* on Pallas. Nothing would be anything like it was before, she knew.

The press was there, of course, making Duane fret; he wanted to see his wife! He was excited, and uneasy. He hadn’t seen Shirley in two decades, she hadn’t seen him in four. He took a hopper to the dome where she had been living for eighteen years, and he consulted a map before walking there.

The gravity is weird on Mars, for someone who has lived his life on Earth with its massive gravity except when he was cooped up in an Earthian space ship. He was self-conscious, thinking his gait was probably really odd.

He got to his new home, and Shirley was sitting in a chair in the yard. When she saw him, she got up and started running, as did he. It got as sappy as in any movie, especially at a third of Earth’s gravity, and I won’t recount it because I don’t want to give you diabetes. The two had known each other all their lives until Duane was sent to Anglada, and each had missed the other terribly for decades. Never had tears of joy flowed so freely!

After a lot of kissing and hugging and more, they went to the institute so Duane could meet the psychologists. George and Mildred had retired long ago, and George had died.

On the Titanic, again they almost hit a comet nearly as big as Mars' moon Deimos. Everyone had plenty of time to strap down safely this time, but it was still a close call. This time it was Bill's turn to have a heart attack. "This indigestion is killing me," he said out loud despite being in the pilot room alone, safely passing the comet. Just then Harold burst in looking puzzled, worried, and at his tablet.

"Doc! I was going to go see you, I have indigestion something bad!"

"No you don't, lie down on this medic." He did. Doc put a patch on his forehead and said "You just had a heart attack, we need to get you to the infirmary." At least he didn't say "hospital," Bill thought.

Bill grinned. "Am I gonna live?"

Harold said "Hell, no."

Bill's grin vanished. "I, uh, wow, how long do I have?"

Doc smiled, "Ten years, maybe twenty. Maybe thirty if you behave! Now, let me put this thing on your head so we can operate."

"We?"

"Don't be a smartass."

"You can't take me off duty, you know. I have to get us home."

"It can get us there without you."

"Yeah? Like the Donapardy?"

"Just be glad you don't have to climb stairs, you'd be dead in a week. I want you in a wheelchair for that long."

"But Doc..."

"Do I have to have Jerry help hold you down while I paralyze you?"

"Okay, okay, I'll ride the goddamned chair!"

"Good."

"I won't like it."

"You don't have to."

They frowned at each other, then both burst out laughing. "Look, Bill, Let me operate, okay? Take it easy, will you? I already had four fatalities!"

After surgery was completed and Bill woke back up, Doc

told him again to take it easy. Bill asked “Is it okay if I have a beer or two once in a while?”

“One or two, no more. And no muggles!”

“Doc, I don’t smoke.”

“Oh, yeah, I forgot. Everybody else seems to.”

“It does seem like that, doesn’t it?”

“Yeah. Well, you get your rest, and yell if you need anything. Oh, when you’re out of the chair you’ll meet my dungeon.”

“What?”

Harold grinned. “I had to put up with it, now it’s your turn. You’ll need physical therapy and it’s damned hard work. Physical labor.”

“Worse than stairs?”

“I don’t know, I never climbed stairs. Now get some rest. That’s an order!”

“Yes sir,” Bill replied grinning.

A week later he found that therapy was indeed far more onerous than engine and generator inspections. His first therapy session was on a Saturday morning. He missed the concert that night; he was asleep, worn out. “Doc’s a damned sadist,” he said, again talking to himself before passing out on his couch.

About the time Duane’s ship was landing on Mars, the Titanic was entering the sun’s energy bubble, the heliosphere. They would be on Mars in two months, ship’s time, but it would be over a year on Mars.

A few weeks later a speed beep sounded in Bill’s phone. That would be Charlie, he thought. The computer said via his phone that he would meet the oncoming fleet in three days, earlier than expected, and the signal would be readable in two hours. He got a cup of coffee and went in the pilot room. An hour later the message was decoded.

“Oncoming ship, this is GOTS security. We’re here to escort you back to Mars.”

No you’re not, Bill thought, and said under his breath, “God damned pirates!” As experienced as Bill was there was no way any pirate could fool him. First, he was days early. He

shouldn't see Charlie for at least two more days, probably four or five. And that wasn't Charlie! If Charlie had been sick or something, his replacement would have said something. Third, the pirate hadn't known the name of the Titanic, or Bill's name.

The Titanic hadn't been armed when they first left the solar system, but it was now, arms having been installed when they thought that Duane was a contingent of armed, violent invaders rather than a lone scared kid who had been forced to go to Anglada against his will. He had two EMPs, a laser, and three hydrogen bombs. It had taken a long time for the generator to produce enough plutonium for a single one in the two weeks from Duane's threat to his orbit. Two more were made after Duane had defected before Joe shut the robots down.

"Roger," he answered the pirate before arming his weaponry. He then called Jerry. "You can't tell anybody, but we're going to have trouble tomorrow. There are pirates heading this way, pretending to be GOTS security. We'll all need to strap down. Could you come up with a reasonable excuse for it?"

"Shit. I'll try to think of something."

Next he needed to alert his crew, Walt and Joe. There were going to be extra inspections needed, and the inspections needed to be as thorough as possible.

Jerry's voice came over all of the speakers. "Attention please, folks. I am running a psychological test in a day or two and Captain Knolls says I have to alert you, although alerting you might spoil the study and will at least necessitate an asterisk.

"When the test starts, the captain will ask you all to strap down. Please don't ignore his request, he will be doing some strange maneuvers. Again, this is just a test."

Jerry's a genius, Bill thought.

Two days later as he was eating breakfast in his quarters, Bill's phone beeped. The pirate was in radio range. He told the machinery to not throw his breakfast away and went to the pilot room to talk to the "escort." He played the

record back.

As he played it, he relayed it using a frequency GOTS used for emergencies; Charlie would be monitoring that frequency. “Oncoming Earthian craft, this is GOTS security,” the message said. “We will meet you in three hours and will dock for inspection.”

He called Jerry. “Say, Bill, is it time?” Jerry asked as an answer to his phone call.

“Almost, three hours. Could you come to the pilot room?”

“Be right there.” He had been in his quarters watching a holo. He shut it off and went to meet Bill.

Bill told him. “A minor miracle. They think we’re Duane.”

“Duane?”

“The little Earthian, remember? They left for Mars right after the Martian Glory arrived with the new communications gizmos. They’ve probably been on Mars for a year or two now. Here’s the record.” He played the recording.

“Well, shit. I’m afraid I’m not going to be much help, you’ve dealt with pirates.”

“But you have a doctorate in psychology!”

Jerry shook his head. “Nobody knows everything about anything. I’ve never studied the psychology of piracy and pirates, but you’ve dealt with them. You surely know more about the subject than I do.”

Bill was pensive for a few seconds. “Well, stick around, anyway.” He asked the computer for an antique Earthian word for “terrible” and it responded “Verskriklik is Afrikaans for ‘terrible’.”

“What’s ‘Afrikaans’?” he asked Jerry.

Jerry shrugged. “Hell if I know.”

Bill hailed the pirate. “Earth ship Verskriklik to GOTS security,” looking at his screen and hoping he pronounced it correctly, even though it surely wouldn’t have mattered. “We are a robot-controlled ship, and can’t maneuver.”

The pirate responded “Okay, we can match speed and dock.” a second later said “Be prepared, one hour and ten

minutes.”

“Roger.”

Jerry got on the ship-wide intercom. “Your attention please, folks. The test will begin in an hour. I will alert you. Thank you for your cooperation.”

Lawrence McMahan was in the commons with Mrs. Harrington. “I don’t like being a guinea pig,” Larry said.

“Oh, fiddlesticks,” she said. “It’s something different to do. Psychology needs study just like geology does. Why do you think they sent psychologists? They want to know why the people on that ship to Sirius went crazy. I’m kind of interested, myself.”

“Well, when you put it like that. Where’s that robot?”

In the pilot room a robot had pulled an unneeded chair in for Jerry, who didn’t need it, either. Bill planned to carry out his plan as easily and painlessly as possible. “Look, Jerry, we might not have to do any fancy maneuvers, I’m going to let him think we’re docking and drop an EMP on his ass. But we’ll strap in for safety, just in case.”

Just then, Charlie came over the radio. “Bad news, Bill, we won’t be there until tomorrow and they have a GOTS ship, brand new, stolen from the shipyard. It hadn’t even been christened yet. We don’t know if he has a fleet, but mine will meet you tomorrow.”

If we survive, Bill thought. GOTS was the one shipper who never got boarded. GOTS vessels were impervious to EMP blasts unless the pulse was the tremendous electromotive force loosed by an a fission or fusion explosion, and it had to be closer than two hundred meters to do any damage at all. Pirates had only gotten hold of two GOTS vessels in the hundreds of years since Green and Osbourne started the company, this would only be the third. It had taken a huge fleet of GOTS battleships each time to defeat the pirates. Both ships had to be destroyed, and there was a lot of damage to the attacking GOTS vessels as well.

He looked at Jerry. “We’re in deep trouble. We could hold off half a dozen normal ships, maybe a dozen, but that’s a GOTS. I sure as hell hope they stole it before arms were

installed.”

“Wouldn’t they install their own?”

“Yes, but they only have lasers. The Earthians don’t even have nukes any more since the legendary 2245 meltdown in Botswana. But if they manage to dock, we’re in deep trouble. I’m gonna have to nuke ‘em.”

“Didn’t you say once GOTS ships were impervious to nukes?”

“Almost, might as well be. A nuke won’t destroy one, or even damage it unless it’s closer than two hundred meters. I’ll wait until they’re fifty meters from docking and hit their ass with a magnetic one with a two minute fuse, then get the hell out of there!”

“Sounds good.” Bill’s phone rang. It was Joe, telling him inspection was finished.

“Are you upstairs?”

“Yeah.”

“Good. Time to strap in!”

“Headed to my quarters now.”

“Wait, go to the commons. When I get on the intercom, make sure everyone has left, then call me when you’re strapped down.”

“Okay.”

He switched to shipwide. “Ladies and gentlemen, Ralph won’t tell me exactly when his test starts, but you need to be strapped down in five minutes, and I’m serious about this. Remember the comet!”

The stolen ship came closer, and a landing craft exited. “Damn,” Bill said. “I thought they’d dock ships. Son of a bitch!” He put on a holster with a projectile pistol on one hip and a microwave pistol on the other, and three grenades. The projectile pistol was chemical rather than a rail gun, but as deadly. The microwave gun only caused excruciating burns. He gave Jerry a look.

Jerry said “What are you going to do now?”

“Probably die.”

“Die?” Jerry asked.

“I sure hope not. If I don’t kill those pirates we’re all

dead.”

“Those?”

“We can’t assume there’s only one. There almost never is.”

He called Walt and asked him to go to the pilot room and do whatever Jerry told him to, then called Joe. “I hope you’re ready for a fight, old man. Please meet me by the landing craft hangars.” He grabbed another holster and headed there.

Joe met him on the way. “Uh, Bill? What are we doing?”

“Maybe killing a man. Put this on.”

“Holy shit... it’s really pirates?”

“Yeah. Ever shoot a... no, never mind. Here’s a microwave gun,” he said, putting down the holster it had come from. A robot would pick it up.

“Just point it and shoot. But not at me, they hurt like hell and you need medical help. Stand right here, and if he kills me, when he comes through the door, pull that trigger and hold it down until he does what you say.”

“Holy shit...”

“I might get ‘em first. Stay out of the way of the door, if I pop off a grenade there will be shrapnel. I’ll be dead, but so will they, and Charlie will meet you tomorrow and supply a new captain.”

“Holy shit!”

“Stop saying that! Snap out of it, man, everybody’s life might depend on you!”

Joe shuddered. “Sorry.” He moved to a corner and Bill went in the empty hanger’s airlock door, waiting with his radio pistol pointed.

The door finally opened and Bill fired. A little Earthian-looking fellow with some strange glass things held in front of his eyes with wires that attached them to his ears screamed and fell on the floor writhing in pain. The thing fell off of his face and the glass broke when it hit the floor. He appeared to be unarmed.

Harold came running in and put a patch on the little man’s forehead. A medic rolled in. Bill said “Wait, Doc.”

“I have to get this man to surgery!”

“Not yet, you don’t...”

“Holy forks and splinters, this can’t possibly be part of the test.”

“Look, Doc, we may all be in great danger. Just wait. You!” he demanded, pointing at the little man. “What’s your name?”

“Günter Heineken, sir. How is it the pain is still there but doesn’t hurt?”

Bill squinted and frowned. “What kind of name is that?”

“Bill...” Harold said.

“Shut up, Doc, this man is a pirate and I need to find out how many more there are.”

“Pirate?” the pirate said. “Huh?”

“How many on that ship?”

“Huh? Nobody, I’m by myself.”

“Take him to the infirmary, doc, but I want to finish my interrogation before you start operating. You, Grunter, if you’re by yourself, how did you get that ship?”

“Well, I’ve been living at that shipyard for five years. I found it all unguarded and just decided to take it for a ride.”

Joe had walked alongside, not knowing what else to do. “Joe, do you know how to operate that boat remotely?”

“I know the controls and readings, but...”

“Can you tell if there’s anybody inside?”

“Sure, accessing the medical readouts is easy.”

“Would you go do it, and call me?”

“Sure.” He left for the pilot room. A couple minutes later he called. “It’s empty as a zipped down angle trimmer.”

“Good! Tell Jerry to call off the ‘test’.”

They were at the infirmary by then, and Doc said “Okay, Bill, now it’s time to operate on this poor fellow. You can interrogate him later.”

Halfway through the word “later” Jerry came on the intercom. “Ladies and gentlemen, you can all unstrap now, the test is finished. Please meet me in the commons in half an hour and I’ll explain the findings.” The gravity hadn’t changed once.

In the commons, everyone but Bill, Harold, and the

pirate assembled. Harold thought, now this is normal, missing the show again until tomorrow. Jerry stood on the stage.

“Sorry to annoy you folks like that, but it’s better that you be a bit annoyed than scared out of your wits. We encountered a pirate...” there were murmurs from the crowd. When it quieted, he continued “We thought it was a fleet after the returning Earthian ship...” someone yelled “You lied to us! There was no study!”

“But there is,” Ralph answered her. “In fact, it’s not quite finished. Why do you think they sent Ralph and me? Two reasons, first to find out what besides the time warp causes mental illnesses from interstellar travel, and secondly to try to prevent or alleviate those illnesses in you folks.

“Part of the test is a survey on your phones now. For the sake of science, please answer as fully and accurately as possible. Are there any questions? Yes, Daniel?”

“Well, what happened? Did you kill the pirates? How many were there?”

Bill was in the pilot room, remotely rigging the stolen craft to cruise alongside the Titanic. He then walked back towards the infirmary. In the infirmary the robots woke the pirate. “It stopped hurting,” he said. Then a surprised look came on his face, and he said “What... where’s my glasses? And how can I see? I’m blind without them!”

Bill walked in. “Hi, Doc. You, Grunter or whatever the hell your name is, how did you know about the Earth ship?”

“It’s Günter, sir. It was the videos! It’s been all over everywhere for years. Look, I’m really sorry about everything but I’ve never had anything!”

Bill frowned. “Goon Turd? What the hell kind of name is that?”

“German, sir.”

“What? You’re Earthian?”

“Yes, sir. Please don’t kill me!”

“What? Why would I want to kill you?”

“You said I was a pirate, and you kill pirates. They say on video spacers kill Earthians on sight!”

“That’s not how it works. We don’t murder anybody,

but if a pirate freezes to death in his stolen craft, or dies in a shootout with security, nobody's going to mourn a murderous thief. Now, how did you get off of Earth?"

"I stowed away on a spaceplane, then a spaceship."

"How?"

"It's not hard if you pay attention and figure it out."

"But it's been years since a ship left Earth, before we left."

"One left about twenty years ago, that's the one I stowed away on."

"Why did you try to steal this ship? You just like taking what isn't yours?"

"No, I... I wasn't going to steal it, I was going to give you an escort. Maybe they'd let me stay in space."

"You might spend some time in weightlessness, orbiting Mars in its prison."

"But..."

"You stole a space ship. Doc, paralyze him until Charlie gets here tomorrow, I don't trust this little thief."

"Wait! How can I see without my glasses?"

Harold put a patch on Günter's neck, paralyzing him from the waist down. "I operated on you for astigmatism and extreme myopia. You were next to blind."

There had been a cure for myopia, or nearsightedness; presbyopia, or farsightedness, even age-related; and astigmatism since the very first years of the twenty first century, but back then it was almost never used except for cataract patients.

Bill went to the commons for a beer, just in time to hear the band's second number. It wasn't Saturday, but somehow they had wound up on the stage.

The next day they met Charlie's fleet. "Guess who gets the finder's fee this time?" Charlie asked.

"You?"

"Bill, you got the ship back in one hundred percent perfect working order. It needs some maintenance after your prisoner had it a while, but nobody's ever retrieved a stolen GOTS ship before, ever. The first two had to be destroyed. You

get the fee and it will be huge.”

“He’ll be your prisoner shortly. Doc has him paralyzed. But if I’m getting a finder’s fee I’m splitting it with Joe and Walt. Joe especially deserves it, I think he might have shit his pants once. Guy’s brave, scared to death but did what he had to do.”

Charlie laughed. “We have two craft out, one’s going to you and one to the unchristened ship. I’ll buy you a beer on Mars in a week or so.”

Epilogue:

Journey's End

As with the approach to Anglada, Bill turned on the holographic wall showing the approaching planet. Having almost no atmosphere, it wouldn't give the pretty light shows they saw on Anglada with its thick atmosphere.

The circle would be disconnected so that the the spaceplane could dock. The Titanic would be headed to the orbital shipyard for maintenance after everyone boarded the landing craft. A maintenance worker would fly the Titanic to the docks.

They were surprised that there was a little bit of a sunrise show. There must be a little more atmosphere, Bill thought.

The two hundred seat space plane that docked with the Titanic was sparsely populated with the remnant of the passengers, which was everyone except almost a dozen of whom had left in the Earthian ship and the two dozen who had stayed on Anglada.

The plane landed outside the Marineris dome. All were surprised at the new Marineris ocean that had been a giant pile of ice when they left. They had seen movies of Earth's oceans, and the Marineris was nothing like it; almost flat, with no huge satellite to pull the water around like on Earth.

It taxied to the hanger that doubled as an airlock. When they entered the terminal, they were shocked and surprised to see a huge contingent of news reporters and cameramen with their holographic cameras, and the multicolored laser flashes from the older still holos were like a twentieth century hippie light show. A huge group of people were waiting for Will.

Bill snuck out through an employee-only door as the reporters tried to find the almost three hundred year old spaceship captain. He pattered around his workshop for

seventeen years before another heart attack took him. There's a statue of him outside the Marineris dome; the Ramos family had it erected.

Every bar in space clamored for the Titanic Band to play, at first offering free drinks, then cold hard cash, and then it became almost a bidding war. They decided to play a different bar every week, with a set payment, but only on Mars; the pirates were still bad in the belt. All started giving music lessons. Some of their students went to asteroids and taught music to other asterites.

Live music had died a long time ago, but was now in rebirth.

Günter spent ten years in Mars' orbiting prison before being awarded Martian citizenship. He died young; for a spacer, anyway, only seventy three. That was ancient for an Earthian.

Harold suffered another heart attack a year after his return to Mars, and died of a stroke a year after that.

Lawrence McMahan and Mrs. Harrington were married three years after returning, and spent the next fifteen years together, seeing the Titanic band whenever they played in their dome. They died within days of each other.

Duane and Shirley were together for twenty years before Shirley died, still very, very old for someone who had spent her first forty years on Earth. Duane died ten years later, some said of loneliness.

The psychological study Jerry wrote up explained that mental illnesses that the Sirius crew suffered were a result of the time warp, the agoraphobia, boredom, and loneliness. The only ones on the Titanic who showed any mental illnesses at all were Mary, who was ill to start with before the successful treatment, and Edward, who committed suicide on the way home on the Earthian ship. The fact that all had been warned about possible insanity oddly, or perhaps not so oddly, helped keep them sane.

Billy had showed up at the spaceport to meet his grandpa when the spaceplane had landed, along with his entire family; his wife and children, their spouses, and their

children. Will's friend Harry was with them, now a very old, very wrinkled man in a wheelchair.

Will and Bill looked more like brothers than grandfather and grandson. Will had left Mars with no family, and returned to a large one. He lived happily for another thirty years, surrounded by his large family.

Other stars now awaited for humans to visit, or even colonize. The madness had been vanquished.