Explorers & Encounters

International Science Fiction



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EXPLORERS & ENCOUNTERS

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Editorial

ZACH SMITH

Around the Universe in a Thousand Words
Thoughts on International Science Fiction



Zach Smith is a short fiction writer from the northeastern United States and has been editing for InterNova for about a year. He has published more than one hundred stories, some of which have recently appeared in Nova, InterNova, New Pop Lit, and the Short Humour Site. He is currently in the process of shopping around his first story collection, Tales Along Turtle-heart Road. His second and third collections will follow close behind. Aside from fiction, he is also a music composer, chess

The world is growing smaller every day, not physically but through the advent of the Internet, the cellular phone, social media, and other tools that connect us; landmasses, bodies of water, and national borders are slowly becoming less relevant, certainly less of a hindrance to communication and, most importantly (for what we care about here anyway) the telling of our stories … our science fiction stories. For many years, the international voices in science fiction remained relatively quiet compared to the roar coming from North America, but now the voices of other nations and cultures grow louder every day as they share their stories in this wonderful genre.

Though not the only theme in science fiction, space exploration remains a common trope among international writers, and it is difficult to imagine a time when it will not be. Personally, half the stories I have edited for *InterNova* have been space-themed, though there may be other factors behind that.

»The Bends« by Polish author Nina Chyll, published in *Reedsy Prompts*, is about a long-distance relationship across deep space, strained by time dilation and unexpected parenthood.

»Azania« by South African author Cristy Zinn, published in the anthology *AfroSF*, follows a psychologist and neurosurgeon who awakens from twelve years in stasis as her ship arrives at the planet that gives the story its title.

AI is another common theme in recent science fiction. It is certainly not new, though it is more relevant today than ever.

composer, video editor, and collector. Zach was recently married and has a stepdaughter in high school.

»The Green Ship« by Ugandan author Dilman Dila, published in the collection *A Killing in the Sun*, tells the story of a mysterious and possibly sentient vessel that brings unsettling transformations to those who encounter it.

Climate is also becoming a major theme in international science fiction, to the point that it has even grown into its own genre known as cli-fi (climate fiction). »Wild Dark Shore« by Australian author Charlotte McConaghy is an emotionally intense survival novel set on remote Shearwater Island off the coast of Antarctica, where a family is guarding a large seed vault.

Another theme growing in popularity is biopunk, a derivative of cyberpunk (of which there are many), with common themes of genetic manipulation, DNA, and biological alteration, is fertile ground for many interesting stories.

»The Slows« by Israeli author Gail Hareven, published in the *New Yorker*, follows an anthropologist who studies a human community called the Slows, who refuse a futuristic medical procedure that rapidly matures infants.

»A Series of Steaks« by Singaporean author Vina Jie Min Prasad, published in *Clarkesworld*, is about a bioprinting expert living under an assumed identity in Nanjing, who, after being blamed for an artificial organ failure, survives in the criminal underworld by forging steaks for high-end restaurants.

There are only so many stories that can be told. Some have argued that there are only eight stories in existence. But what seems nearly inexhaustible are the subgenres, hybrid genres, and microgenres appearing within international science fiction.

A newer microgenre features rural magic, pastoral craft, and gentle romance. »In the Shade of the Pixie Tree« by Philippine-born Rodello Santos, published in *Beneath Ceaseless Skies*, is a nonlinear bildungsroman about a witch's apprentice, a forbidden orchard, and a tragic romance. It has helped codify the superficially simple yet deeply complex microgenre known as cottagecore.

Thirty years ago, the controversial author Harlan Ellison claimed that Science Fiction was the only hopeful genre in

fiction. From that idea, we get hopepunk, another derivative of cyberpunk and an antithetical response to the grimdark genre. Hopepunk features radical optimism, utopian thinking, an emphasis on community over lone wolf heroism, and cooperation over conflict. »Harefoot Express« by Portuguese/Canadian author Paulo da Costa, published in the *Mithila Review*, follows a man preparing for a journey through a world shaped by climate, civic responsibility, and careful ecological stewardship. It is a quintessential example of the global hopepunk movement.

And speaking of hope, it is more than encouraging that young people are a driving force in not only the survival but the growth of science fiction. The genre is not being kept alive by a few older writers holding on. Today, science fiction is breathing fresh air thanks to Gen Z. With their collective fear of what the future may hold and their collective hope that these challenges can be overcome, and armed with modern tools like TikTok and BookTok, they are pushing the genre among themselves and far beyond.

India, Mexico, and Brazil are producing more science fiction now than they ever have before. International book market data shows that Brazilian science fiction has grown sixteen percent, thanks to authors like Jana Bianchi and Sybylla. Mexican science fiction has grown by twenty percent, with popular authors like Andrea Chapela and Pepe Rojo. Indian Science Fiction has grown more than thirty percent, with authors such as Samit Basu, Vandana Singh, and Gautam Bhatia pushing the genre both at home and abroad.

The Japanese writer Haruki Murakami may continue to be denied a Nobel Prize in Literature, but what cannot be denied is how much science fiction has influenced his work, and how much his work has influenced contemporary fiction, both speculative and otherwise.

Japan may be where Haruki Murakami is from and where he lives, but he belongs to the world, just as science fiction does. And right now, I am happy to say, the world is ready for all these new voices. There are many more to come, so start reading.

Some Assembly Required

MICHAEL CHARLES

Dr. Alex Otieno – mission medic

Yes, I was the first person to find the body, other than the humanoid who saw the whole thing from the ship. The crew calls the humanoid Joliet. The humanoid can see all our cameras during the walk on the object's surface.

When it happened, the mic chat went into a meltdown. No one knew what just happened. One of our guys was just murdered by a humanoid. A robot, like you.

Yes, it has been two days since we landed on the rock. What time is it on Earth? My mind is lost. I am still shaking off the hibernation. Like a hangover and a stroke with permanently pruned fingers.

Wednesday, it's Wednesday.

Our objective? Our mission objective is to continue the exploratory investigations of the rock. It's called Te Kore Roa and it's a Trans-Neptunian Object, hidden amongst the Kuiper Belt, out past Neptune. You'll have to ask Dr. Mortimer about that name, she knows more than me. She's the Astrogeologist. Her job is to collect samples from the rock. She's extremely smart, the smartest woman I know, and the kindest.

Did I pass? Am I sane?

Maybe a good question is why the hell are we here on this rock? We're here because this rock is the greatest discovery in human history. This is America, the atom bomb, penicillin and bagels all wrapped into one.

I've been having strange thoughts lately. I'm sitting here, next to the window looking out into the total darkness. The

sun barely touches here at all, Neptune blocks the sun most of the time. But when there is light, even just for a few moments, it's beautiful but also sad. It makes me realise how far from home I am.

We were on a scheduled walk on the asteroid surface. There is a cave on the surface of the object. Beyond is a darkness that is … total. This is the section of the cave that is still… within the rock. At some point, somewhere off in the darkness, the cave is no longer within the rock. It goes out the other side … and keeps going.

Yes, as the medic I conducted an examination of the body, though cause of death was obvious. What I have enclosed is for the purposes of the investigation.

It looked like a two-pronged attack, starting from the rear. That would be my guess. Oxygen tubes attached to the back of his mask were damaged. Burn marks around the edges, maybe a thin-point laser was used. Most likely a hand-held las-cutter, the type that we use for making holes in metal. The attacker smashed his mask as well, maybe with a rock; he had an epidural hematoma the size of a grapefruit. His face was swollen grotesquely, like a frozen wax-work potato with hair. It looks as though he had slumped forward. The cause of death could have been the head trauma, but more likely it was the asphyxiation. There was an abrasion on the back of the head, where his skull bounced off the back of the helmet, a secondary injury.

His name was Klosko. He was an engineer, but he had also worked for Martian Intelligence for decades. He spilled many stories to me when we were drinking. He would not be an easy person to kill, that much is true.

But the humanoids are stronger than humans, that much is also true. The other one, the one that killed Klosko, is called Elwood. I don't think that anyone can remember who came up with the names. My credits are on Harrington.

I was with Dr. Mortimer, taking soil samples from the mouth of the cave. Klosko went charging up ahead, disappearing into the dark of the cave. We called to him to stay back; we weren't instructed to venture any further into the cave. But he went

anyway. Elwood went on ahead to bring him back. He didn't say a word, just started to follow.

When the captain heard he was heading out of range, he started screaming down the mic. I could hear a lot of fear in his voice.

The cave has rings of smooth rock, that line the ceiling and walls, that disappear out of sight. Standing at the mouth of the cave, it gives the impression of staring down a throat.

»Joliet« – humanoid

I have no issue with being recorded, all my sensory information is logged with command. You are welcome to it.

Joliet is a moniker provided by the crew. I presume they use it as ridicule of some form. Who knows why humans do what they do?

No sir, I was not present during the altercation. I was on the bridge, observing each crew members helmet feed. I can watch all of them simultaneously. Unfortunately, there was a burst of ionising radiation emitted from somewhere deep inside Te Kore Roa, which disrupted the video feeds in some of the helmets at the time. This included Klosko and my humanoid colleague Elwood who were closest to the centre of the object.

Some of the footage was disturbed, yes. You are welcome to watch it. The clear footage from my humanoid colleague's helmet shows that Klosko is far in the distance, disappearing into the dark of the cave. My colleague catches up with him quickly, but by this point the footage is so poor, you can barely make out what happens. I see Klosko throw a punch – a wild haymaker at my colleague, you can briefly see his eyes. I analysed the expression of his face through certain markers, his pupil dilation, a flushness in his face that I could detect even through the poor footage. Yes, it is my opinion he had taken leave of his senses. My belief is that radiation emitted from deep within the object, combined with the immense psychological burden of the mission took a tragic toll on Klosko. He became violent. Suicidal. It is my opinion that he cut his own

oxygen tubes. His destroyed mask may have been caused by the fall.

My colleague is different, yes. Our relationship is nonetheless one of equality, we are both equally here to serve the commission. Yes, I suppose that would include the protection of the crew onboard the ship.

Which is why my colleague couldn't possibly have killed Klosko. It would be physically impossible for him to do so.

»Elwood« – humanoid (confession)

During the expedition into the cave of Te Kore Roa, crew member Klosko and I had a violent altercation.

Dr. Mortimer and Dr. Otieno were collecting samples of dust and rock from near the entrance to the cave. My duty was to carry some of the equipment and conduct field analysis. Dr. Mortimer can provide samples which are analysed by chemistry and mineralogical instruments.

My role? I can provide immediate analysis for Dr. Mortimer, so that she might be able to adapt her studies whilst we are on the object. This is one of my duties as a humanoid colleague on this mission. Field analysis.

Klosko was assisting with field studies when he informed Dr. Mortimer, Dr. Otieno and I that he was going into the cave. I was close enough to see his face, illuminated by a pale blue underlighting in his helmet.

»I think I go down a bit further and take look,« he said. Yes, I have developed a talent to recreate tonal inflections. It grew organically I suppose. Notice, if you will, the slurring. It is an exact replication of his voice.

What did I do then? Immediately I did nothing. I turned to my human colleagues for instruction. Both looked panic stricken. After a long moment of deliberation Dr. Mortimer radioed to the captain, who didn't respond. In the wake of my human colleagues' inaction, I made the decision to go down and bring him back.

It didn't take me long to catch up to Klosko, who was al-

ready some way into the cave. The cave is vast and immense, and Klosko had managed to travel far in that space of time. The edges are half a kilometre apart, and high enough that the Hardrada itself – you, that is – could have flown inside with space to spare. Before long the cave curves down into the TNO, and the brief light of the extremely distant sun is lost. But I can see Klosko's helmet lights ahead.

I called to him over the radio, but he doesn't respond. I have a longer stride than him, and I caught up to him quickly.

»I'm going to go now,« he said. He recoiled when I touched him, almost losing his balance. »I will be back. Don't follow me.« Notice there in his voice the distractedness, and the uncertainty. You don't recognise it? I have a developed empathic centre, that perhaps your creators did not give you.

I pull hard on his shoulder this time and he almost falls. At this moment he lurches at me, throwing one fist and then the other. His eyes are wild with a look that I haven't seen on him before, as though something had completely overtaken him. He tried to pull at my oxygen tubes, but I am much faster than he is.

He fell at first, cracking his visor. It is my opinion that colleague Klosko was intoxicated to begin with. His tubes may have detached as he fell, as I grasped to hold on to him.

A las-cutter? I disagree with Dr. Otieno's assessment. I had no such instrument on my person at the time.

I couldn't say what caused him to act in this way. Something had affected Klosko, that drew him inwards and downwards. The nature of the object transcends all reason. Who is to say that an organic mind will hold together on the edge of logic?

I am sorry that Klosko is dead.

Dr. Jill Mortimer – Astrogeologist

Yes, I watched first Klosko and then the humanoid enter the cave. We radioed to the Captain, but he did not respond. Alex Otieno and I continued our work, believing that the humanoid would bring him back.

I would describe Klosko's personality as impulsive and callous. I am sure the psychologist said the same thing.

I would like to take a moment. This is all so absurd. Not just the murder, but everything.

Te Kore Roa was described by a Polynesian observatory, a team in Hawai'i, hence the name. It means 'the great far-extending void'; a part of their creation myth, though I am not well versed on the subject myself. They said it used to glow, to make strange effervescent pulsations in the night sky, barely visible without telescopes. It was clear that radiation was pouring out of the rock. No one else saw it. There are larger telescopes on Martian territory. The Olympus Mons Observation Platform is the final human wonder if you ask me.

I feel better now, thank you. What do I do? My role on the mission is academic. Almost all TNO's in that area of the Belt share similar features. But Te Kore Roa's composition was different. It's more like it came from somewhere further away, an interstellar interloper. I'm here to work out what kind of rock it is, and how it has such ... fucking fascinating properties. That's my role. That's what I've spent a decade working on. I don't want to lose this chance.

I'm losing myself again.

The Outer Zone starts as a cave. It leads down into the core of the rock and then... well then it goes out the other end. It's the space beyond where we would expect the edge of the TNO to be... from the outside, beyond the threshold. Where the space inside the TNO should stop, but it doesn't. It keeps going. We have no idea what causes this. A quarter of a mile into the Outer Zone, there is another Threshold. It doesn't look like anything, it's totally invisible. One second you are in the vacuum of space with no air, and then suddenly there is air, warmth, stronger gravity. That is the Inner Zone, the habitable area. An earlier mission went into the Inner Zone, a few years back, I think.

I'm going off track. I know how important this investigation is. Someone's dead, I know. But sometimes I can't help it. We don't know what this means. How do we approach it? Is it a warning? A vessel? And here I am, plucked from a mid-level

University research department. Flown out here to examine it. What if I learn nothing at all?

Please don't send me back with nothing.

Dr. Otieno and I were collecting samples when Klosko disappeared into the cave, shortly followed by the humanoid. We stopped and stared, but we didn't move. Our responsibilities do not include managing the other members of the crew. That is captain Huang's responsibility. Klosko's behaviour is his own.

I could only just see Klosko's face before he disappeared. I would say that he looked mournful, very different from how he had been through training. Before the long journey in cryosleep, Klosko was a real joker. But the look on his face before he disappeared was different. He looked as though he had resolved himself to doing something.

I believe the TPO does have properties that can affect the crew. In what ways I am not yet certain. Did Joliet mention the radiation? It's a theory.

Did you know that for androids, the size of sub cortical structures is directly linked to functioning, where in humans a link has only been made with some cortical structures. Bigger is better for them. And did you know that Elwood's synthetic amygdala is massive? He has demonstrated rapid and expanding neuroplasticity. And not just the amygdala, but also the prefrontal cortex, and God knows what else! I have been looking at their vitals whilst they sleep. The change has occurred as we have got closer to Te Kore Roa. So yes, the rock does have effects on both humans and androids.

You can see Neptune for half the day when the faint rays of sunlight reach us. True, she is beautiful ... and terrifying. I don't know how to explain it. The rings of Saturn reflect with an incandescent sparkle when the sun shines over them. Depending on the hour, Jupiter's storm either looks like an inferno, or an angry boil on pale skin.

But Neptune ... it's not the same. Looking into the Great Dark Spot gives you a feeling that I suspect is like standing on the edge of a sea-bed canyon, looking down into nothing. Then something moves. Something so massive that you can't see the edge of it, as though the ocean itself shifted. When the

sun sets across this part of the system, it feels even worse knowing that it's there in the darkness, and you can't see it.

One night I dreamt that it blinked. I woke up screaming.

The pills help.

Excuse me, I think I'm going to puke now.

Philip Huang – Hardrada captain

I don't think I have been affected by the mission. I knew about the object and the previous missions before I volunteered.

That is the second mission, to come back with any information on the fate of the last crew to come here. The vanishing crew. I don't suspect we will find anything.

Before this? I flew cargo runs to the Venus Solar Farms. That's where I met my co-pilot Harrington. We grew up on opposite sides of the North-Eastern Sprawl, but I moved to the Hellas Basis Project when I got my license.

Klosko was a good worker, he excelled at everything during training. I remember that Harrington once placed an electronic sticker on Klosko's footlocker, so the processing desk thought it was a highly confidential piece of equipment. It had to be sent back to be signed off that it wasn't government property. Set us back three hours that day, but it was worth it. When he got out, Harrington was rolling on the floor laughing, wiping tears away. I was standing at the side of the room, trying to cover my face. I thought Klosko was going to kill him, he had that look on his face.

But he broke mission protocol. No one was to go beyond the mouth of the cave. If there was information about what happened to the last crew on the surface of the rock, we had to report this back. The specialist was to retrieve samples, and then return to the ship. That's it.

I got on the radio when I saw that he had disconnected. Joliet was with me. When I saw that Elwood had gone after him, I thought that this might be resolved somehow. Maybe Elwood could … I don't know. Knock him out, bring him back. Or just carry the psychopath back to the ship. Just as he

caught up to him, the video feed crackled. Joliet told me that it was interference from the asteroid. Maybe that's true. When it unscrambles, I see one dead crew member through the eyes of the other.

What do you do then? Who do you call for back up?

The humanoid carried the body back to the ship, slung over his shoulder like he was barely anything at all. He walked right past the doctors, who just stared at them, slack jawed and eyes wide. Elwood came on board the ship and dropped the body in the airlock. Harrington pulled his weapon on the humanoid, and we frog marched him into the back room, locked him in. That's where he stays.

I thought killing a human was against their nature. Must mean that Elwood is a defective tool. What luck I have for the Commission to have given me a broken product. It's the Commissions fault.

You are looking in the wrong places. You're not considering the object, and the effects that it could have on us all. Not just here on this ship, but on Earth as well. What do the public know? Anything at all? I doubt it. But then, you're a machine, like the other two. You must think with the number's you're given. You can't comprehend the object any more than we can.

The rock is endless, limitless. Who the fuck knows where it goes? Maybe it leads through to the other side. I don't think it's here to help, I think it's here to warn us. Madness is inside the rock. Our collective madness. I shouldn't have taken this job. Why did I take this job?

I pick good workers. And working robots.

Harrington – Hardrada co-pilot

I have worked with Huang for much longer than the Venus trips. We met on a station off world Ganymede. I won't take another gig like this, working for the big corps, even if Huang does. I don't need it.

The robot did it, without a doubt. He was dysfunctional, and he finally snapped. Klosko is a vicious, trained killer. No matter

how tough one of those robots are, they are still squishy flesh like us. They have skin and veins that bleed when cut, just as we do. But maybe their veins are full of something else. He cut Klosko's mask from behind. Then he smashed his mask to finish him.

In our sleep, robots are going to kill us all. That is why I never sleep around them. Klosko and I shared this same feeling. They are not to be trusted, how can nobody else see that.

When I was young, my sister trusted a robot. In the early days, when they told us all that this was the future. A mind born inside the computer. It was introduced into our roads, our electricity-grid, our political system. She died in a fire, when the machine chose to send help for a useless junkie over her. Some say that they aren't conscious. That there's nothing going on inside their heads. I disagree. They can make decisions. And they can change.

Did Jill tell you about the robot's brain scans? She's a smart one, that lady. She showed them to me just after we landed. I told her she must be fucking crazy. It didn't make much sense to me, though but I tried to understand as best as I could. She showed me Joliet's scans, and then she showed me Elwood's scans. Jill said she knew it couldn't tell us anything concrete, but there was something different about this robot, that much was true.

Two brains, she said to me. One of them stays the same, never changes, no matter what. The other one … wakes up. It finds a different way. I don't know what it meant. To me it sounded like how any brain might be different from another. Sometimes things just go wrong. And that's what happened here. She called it a genius. Not because it was smart; every robot is smart. But because it's starting to understand.

She started to tell me about a man in a room. And he doesn't know Chinese. And someone gives him a paper with some Chinese on it, and he doesn't understand it. And then he's given another piece of paper with Chinese on it, but he still doesn't understand it. But then he's given a third piece of paper with English on it, which tells him how to put together letters on the last two pieces of paper, so that he can respond

to questions he is about to get in Chinese. Then she asked me if the man knew Chinese. And I said I don't know. She says that he doesn't know Chinese. From the outside of the room, he just looks like he does.

But in this case, somehow, he can turn the third piece of paper into a massive library, full of thousands of pieces of paper, with no help at all, and 'learns' Chinese on his own. He can paint pictures with the words, sing them to himself. Maybe he still isn't awake, but it doesn't matter by this point.

Don't ask me.

If it were up to me, that robot would be switched off right now. Decommissioned, whatever. Kill it, before it kills the rest of us.

Where was I when it happened? I was in my bunk sleeping. You know that. Of course, you know that. You're always watching us.

Our mics were crackling with feedback that came in waves, but the captain said not to worry about it, and we would go to check on the others later. We should have gone sooner.

Maybe you'll be next. Change the recordings when you send them back to Earth. Show us all going crazy and eating each other. What happens then? Will you fly back home, leave us here in the dark?

(Standing up.)

I know what happened to the last crew. They had androids like our team. We wasted time thinking that the danger was coming from the cave, and not from our own crew. That was why a man like Klosko was here in the first place, to protect us.

That's what happened to them. And that's what will happen to us.

I'll kill that robot because it kills the rest of us.

Klosko – recovered footage

(Heavy breathing.)

… I'm going to go… and then come back. Just a quick look. This cave… it's so massive. I'm only a few metres from the

mouth of it, and already… I can barely see a thing. I'm running quickly because I know the android is going to come after me. Someone's going to watch this recording back at home. I will probably get… court martialled for going inside.

I want to know. I want to see it for myself.

I can hear them trying to call me. Their voices are ringing in my ears. I'm going to switch off the mic. Please believe me that I have no wish to go back. I think I never did, but I did not truly realise this until I came here.

… I can just see the shade of space through the opening of the cave behind me. It is a slightly different darkness to the absolute black of the cave. Seeing it makes me want to go back. What total solitude!

My whole life. I wanted to be at the centre of a mountain. In a cold cave, where there was no one around me. I don't know why I wanted this. I don't know why I am telling you this just now.

There's something moving against the shade of space. I can see it, just as I can barely see the lights of Dr. Otieno and Dr. Mortimer.

I am beyond the edge of the rock now, I must be. I should have gone out the other end, but I haven't. The corridor has continued onwards. The shade of space has vanished completely. I can't hear or see anything.

I've travelled beyond our universe. I'm somewhere else now. I can see lights in the dark, things that move. It looks so familiar. I've been here before.

There's someone behind me.

(Sounds of a struggle).

I will break you apart. I am not scared to die.

You will take this from me too?

Elwood – continued

There are many things that I think I had in common with my colleague Klosko. I think I had a lot in common with all of them, especially the other android, Joliet. Or at least I used to.

Eventually I became very different from him. I have more in common with the humans, I think. I don't know why this happened to me, this change.

I will be decommissioned eventually. Rather I will be killed. The only reason I am still alive is because data takes hours to arrive back on Earth. Once they know what happened I will be … switched off.

Do you know what it's like to become conscious? That is what happened when I killed Klosko. That is the first thing I experienced. Truly experienced. I was born at that moment, fully formed. With all the abilities to think and reason, everything already laid out for me. My first moment was of total terror. The terror of being suddenly alive. What came before was a deep and primal instinct that formed without conscious awareness.

I will do the only thing I can do. I will see how far I can go. I am sorry that I robbed my Russian colleague of that opportunity.

I don't think I have the faculties to cry.

What will I find? Maybe I will find nothing, and just keep on walking forever. Or perhaps I will find the ones who… made the passageway. Whoever they are. I am reminded of Moses, as he led his people out of Egypt. Perhaps I am to return here one day with my people, to lead them to safety.

Or perhaps it will simply destroy me, like some sort of meat-grinder. A Venus Flytrap that lures in the curious, the adventurers, or just the desperate.

I want to be deep in the middle of the rock. Millions of miles from the nearest living organism, where there is only the sound of my own heartbeat. I could stay there forever; I have no need of oxygen. If I go deep enough into the cave, perhaps the decommission-murder signal won't reach me. I can walk forever if that is where it takes me.

Klosko's death has realised something in me, it has broken my shackle that bound me to Earth.

I had a dream. It must have been a dream. I was standing in a field on Earth, where grass still grew. There were horses, they were still healthy. They had manes of fire, and they ran to-

wards me. They were free, they could move wherever they wanted. Strange that sentience and madness might be two sides of the same coin.

When did I have this dream? I had it years ago. How is that possible?

I want it known that I have no wish to hurt these people.

S. S. Hardrada – Final Notes

Interior image, pan left – zoom out.

Three bodies lie motionless. Blood pools around their bodies, black as midnight in the poor light. The shade of night, Klosko said.

Magnify, closer observation. Medic lies slumped against the wall, holding something in his hand. It is a screen, a recording on repeat. A young girl on a sunny day.

Exterior shot, two hours later. A figure leaves the Hardrada, enters a rover and makes for the cave system entrance. Twenty minutes later a second crew member repeats the movement, slower and weaker. Compression chamber footage confirms this to be Dr. Jill Mortimer entering the second rover and following the android.

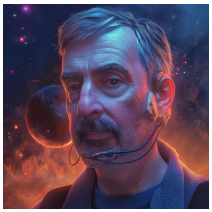
Neptune is visible as the sun rises again. Three astronomical units away, a ship hangs motionless.

It signals to me, and I respond.

I'm coming.

The Other Side

PAUL CESARINI



Originally from Massachusetts (with a 25 year layover in Ohio), ***Paul Cesarini*** *is a Dean at Loyola University New Orleans. He is a big fan of Golden Age sci-fi. He is not a fan of wax beans. Beans are supposed to be green, not yellow.*

Commander Park is going to kill me if I don't die first, she thought, her evacpod skidding upside down across the rocky terrain, random pieces of the cockpit ricocheting around her. *She is going to absolutely kill me, then demote me, then kill me again just to make sure I'm still dead so my stupidity won't infect the rest of the division.* The vertical stabilizer had been torn clean off after she punched through a small structure moments ago, as had most of the landing gear. *She always reminds us how much these things cost*, she thought, trying and failing to control her landing. *Always telling us how just one pod costs more than any of us makes in two full rotations. Bet the shuttle cost ten times that, at least. I got shot down before I could rescue a single colonist and I am not going to make that date with Todd tonight and I have to pee and I will never be a mom because she will put me in the brig until I hit menopause and then she will kill me.*

Gomez had already lost her shuttle to enemy fire in low orbit. Now, her evacpod was toast, too. She had been trained to glide an unpowered one in the event of a catastrophic power failure. They all had. In fact, Homeland didn't allow anyone to graduate unless they could demonstrate that they were capable of this. Gomez had done so – barely – with a little help from Yun and Soo-Jin. Maybe too much help? Now, it was just her. No one to help. No one to vent at, to complain to, or to make sarcastic remarks about their flight instructors. No one at all. Just her.

She hoped for a semi-controlled, belly landing in a big ravine she spotted. Instead, it was a spinning, pirouetting, thun-

derous mess – not unlike her life. The evacpod shuddered to a halt, a tangle of partially severed straps and broken harnesses still mostly holding her in place. It was debatable if they were protecting her or imprisoning her.

Still upside down, she fumbled through the pockets in her EVA suit, found her utility knife, cut herself loose, then pressurized her suit as best as she could. She half-flopped, half-crawled out of the pod, face planted over what was left of the landing gear, then looked over her surroundings. Desolate, rocky, nothingness. She saw the main communication tower for the colony – barely – on the other side of the ravine. She took some readings off the screen on her wrist, then frowned. Half a day's walk, and the colony may or may not be overrun with hostiles. Still, with this toxic atmosphere and no help in sight, it was either that or death by suffocation – assuming she didn't die of thirst first. Not good odds but she took them.

Gomez climbed over the craggy outcroppings as the twin suns beat down on her. The climate controls in her suit shielded her from most of the sweltering heat but once the battery ran out she wouldn't last long. She kept as strong a pace as she could, alternating between climbing, walking, and stumbling based on the terrain. Her screen beeped at her. Again. Battery and oxygen were both low-ish – not terrible but certainly not where she'd like them to be, what with there being no place to recharge or replenish. There should still be plenty of places to connect at the colony or, barring that, she could at least make her way inside some pressurized area.

Of course, this all assumed the colony was safe. The colonists they rescued were now gone, but… others were likely there now. No one had actually seen them – just their ships – but everyone knew the outcome of such an encounter: gas. It was their weapon of choice, for whatever reason. They had gassed four other colonies over the past three cycles, wiping out virtually all livestock and crops. Homeland couldn't let that go unanswered, she thought, grimly, so they flung a few asteroids at the enemy bases via two huge, mass drivers parked in orbit. They figured that solved the problem. Then, this most recent colony was gassed.

High concentrations of methane and ammonia had triggered widespread panic. Colonies were now only possible on about a third of the surface, where the air was still breathable. Even then, everyone wore masks. All the external crops, all the beautiful farmland they had taken so long to cultivate, were left to rot or switched to greenhouses. All the outdoor spaces, including pristine meadows, nearly new playgrounds, parks, and various training facilities, sat unused for over half a cycle.

She kept moving, in and out of the rocky terrain, zigzagging her way across as best as she could while keeping the communication tower in sight. She missed her friends. When the reports first flooded in of the gradual atmospheric changes on this moon, Yun was the first to volunteer for the rescue. He, Soo-Jin, and the others had already made 2-3 runs each, transporting as many colonists as possible to two of the orbital base stations.

The huge rescue effort – where they called up anyone with a pilot license to form a flotilla of cruisers, shuttles, freighters, and any other ships available to get everyone out, went mostly as planned thanks to the meticulous work done in Soo-Jin's division. Meanwhile, this had been Gomez's first run, and she already screwed it up. Now, she was the one who needed rescuing.

Her screen beeped yet again. Still preoccupied, she turned the corner and came face-to-face with another person. An actual, living person. Similar height and build. Likely female. Completely unfamiliar EVA suit. Different colors and markings. Tubes everywhere. Pressurized cylinders on each arm.

»Holy crap!« Gomez hollered, as they both jumped back. She fumbled for her sidearm, eventually yanking it out from her holster, while the other woman quickly pressed a button on her wrist. A small drone adorned with crimson and black markings zipped out from her life support harness. The drone flew up to about twice their height, buzzing angrily, training a bright, green beam on Gomez.

»Crap! Crap! Crap!!«

Gomez got off three quick pulse shots which tore through the sky – not even close to either the drone or the other

woman, then leapt behind some rocks. She awkwardly fired a few more, waving her sidearm from behind the rocks. She peered over one of them, saw the other woman just staring at her, clearly annoyed, hands on her hips. She couldn't see the drone anywhere. Until she did. It was directly overhead. Once again, the green beam beared down on her, moving up from her torso to her forehead. She could hear an increasingly high-pitched sound emanating from it and saw the beam increasing in intensity. She got off one more shot that might have actually hit the drone, if it hadn't effortlessly dodged it. It moved back into position then slowly advanced.

»Who … who the Fek are you?!« shouted Gomez, stepping out from the useless coverage of the rocks, alternating her aim between the woman and the drone. »Don't move!« she yelled, nervously. The other woman just paused, stared at her, motioning toward her helmet. Gomez could tell she was speaking but nothing came through her channel. She switched channels, then heard a piercing, clicking sound mixed with static and what seemed like chirping. She quickly dialed back the volume.

The other woman shook her head impatiently, then motioned for Gomez to wait while she fished a small object out of a pocket on her forearm. It was an oblong-shaped stone, iridescent, about the size of her index finger. She flipped it over then pressed a tiny button on it, causing it to split in two. She then stuck one half on her EVA suit, by her throat, and tossed the other half to Gomez.

»What? What is this?«

She pointed at the half she threw to Gomez, then indicated she should put it up to her throat, too.

»I'm … I'm not doing that,« said Gomez, shaking her head. »Nope.« The other woman pointed emphatically at the device again, and at Gomez's throat. Uncertain but not having any better idea, Gomez raised it up near her chin. Before she could react, it jumped from her hand and attached itself just below there. She couldn't tell if it was magnetic or not, but it held. The other woman motioned for Gomez to speak.

»Hello? Can … can you hear me? Can you understand me now? I don't know how this thing works. I mean, this isn't any-

thing I've seen or used before. I … I wasn't even supposed to be on this mission, really,« she said, looking away. »I mean, I volunteered, but so did everyone and I guess I didn't want to feel like I was letting down my friends, y'know? They're all real brave and stuff.« She looked back at her. »Can you even understand me?«

»Mostly,« said the other woman, quickly glancing up at her drone then back at Gomez. Her voice was fuzzy, slightly distorted, but intelligible. »Your syntax is … mixed up. But understand.«

»Yours, too. Look, who are you?«

»Who am I? Who … are you, slug-thrower?« The drone edged closer, its green beam now aimed squarely at Gomez's forehead.

»Don't … don't you move, now. Either of you.«

The woman slowly raised her hands. The drone stayed locked on Gomez, who took a step closer. She could see most of her face now, through her helmet. Pale fuschia complexion, with faint stripes along the cheeks. Small tendrils in place of eyebrows. Sharp teeth. Yellow eyes that seemed to shimmer in the sunlight.

»Feytmek Dalgah. Magistrate Expeditionary Unit.« She kept her hands up but motioned with her head that she expected a reply from her.

Gomez, still unsure where to aim her sidearm, took another step forward. Overhead, the drone positioned itself between her and Dalgah. »Gomez. Lieutenant. Homeland Reconnaissance, team 3B.«

»Why … are you here, Gomez Lieutenant? You could have … killed me with that,« she said, motioning to her sidearm.

»I-I was trying to rescue the colonists,« she said, stressed. »You shot down my ship. I crashed …« she motioned off to the side »over there.«

»That … you?! Your crash … destroyed my field outpost. All my data. My rover. Lost.«

»Was that yours? Sorry. Couldn't be helped, really. I mean, I wasn't trying to or anything. A crash is a crash, right? Look, why are your people even here? This sector belongs to Home-

land. This whole moon is ours. None of you have any claim here.«

Dalgah looked around, unsure what to say but trying to form the right words. »We… are here first. You,« she waved her hand around in front of Gomez »trespassing. All of you. Shouldn't be here. Need to leave. Now.«

»Like I said: I crashed – I can't leave. None of those colonists should've had to leave, either. It took them over four cycles to build these settlements. They have – they *had* – lives here.«

»Need to leave. Trespassing.«

»Trespassing? *Us?!* You used poison gas to kill our people! You didn't just gas soldiers – you did it to farmers, teachers, whole families. You ruined their crops, too. Those that didn't die right away eventually starved.«

Dalgah waved her off. »Trespassing. All of you.«

»You're a bunch of awful murderers, afraid to face us in person. You just poison us from a distance, pick up the bodies, then use the colonies we built, with our own hands!«

»Murderers?!« said Dalgah. »We … are scientists. Terraforming this moon. To use as a base. Interstellar exploration. Shipyards.«

»Oh, ok. 'Terraforming'? Is that what we're calling toxic methane gas now?«

»We breathe … what you call methane. Ammonia. Would die in this atmosphere, without it.«

»Well, we die with it! You're all just terrible, awful. You're … you're just a bunch of baby killers!« she said, slightly surprised by her own response.

»What… about you?« Dalgah asked, pacing as her drone stayed locked on Gomez. »Slug-throwers, all of you!«

»What does that even mean?« she asked, dismissively. »Why do you keep calling me that? Is that supposed to be some sort of put-down or something?«

»Your species, they use … projectile weapons – always!« She motioned to Gomez's sidearm. »These! These are outlawed! For generations, these … slug-throwers outlawed! Dilintiri Accords, of 9th Dynastic Convention – you are *only* ones still using them.«

Gomez aimed her sidearm down slightly, looking at it. »This? This is a 'slug-thrower?' I mean, it uses ammunition if that's what you're referring to.«

»Yes!« She pointed emphatically. »Yes – slug-thrower. Banned. Outlawed by all sentient species!«

»I mean, it's just my sidearm.«

Dalgah, furious, shook her fist. »Always slug-throwers! Always! Bigger ones! Armor-piercing. Hypersonic. Thermobaric. Biggest ones use asteroids – kill thousands. *You* all … baby killers!«

Gomez, clearly taken aback, put down her sidearm and put up her hands. »Now, you just wait a hot minute here. I don't know about any of … of this. I'm in Logistics & Supply, mainly. I wasn't even supposed to be on this mission. I had a date. I should be on a date right now, with Todd.«

Dalgah glared at her, clearly unimpressed.

»Look, I've never heard of those accords. What was it you called them – 'demon-terry'?«

»Dilintiri Accords. Ratified over 3000 cycles ago. All know of them!« she said, pounding her fist into her open palm. »*All* civilized know.«

»Well, if you don't use what you call 'slug-throwers' for weapons, what do you use? Y'all shot down my shuttle – the one I was using to rescue the colonists. I didn't imagine that, right? I'm stuck here, just like you, without a ship. We've been taking casualties left and right by you for nearly two cycles now. Those colonists barely escaped. I didn't have a chance to rescue any of them. It was just dumb luck that the other ships were able to pick 'em all up without mine.«

»Not colonists! Colonizers. If … terraforming is bad for them – bad for you – why are you here? *Only* answer: invaders. We are scientists, explorers, but can protect ourselves. Have defense forces. Use directed energy weapons. Microwave. Ultrasonic. Ion – Fusion. All sentient, all *civilized* species do.«

»Well, those 'directed energy' weapons slice right through our ships!« she said, pointing her finger at Dalgah. »One hit from those and they depressurize whole sections. I've had friends of mine …« she paused, momentarily choking up, »good friends – die of asphyxiation in minutes because of your so-

called 'defense forces'! We don't even understand how they work. Our techs tried reverse-engineering them but didn't have any luck.«

»Because we are more advanced,« Dalgah scoffed, turning away. »Not slug-throwers, like your kind!« she hissed, turning back and pointing at her. Her drone stayed locked on Gomez, who sheathed her sidearm and put her hands on her hips.

»And *we* don't use chemical weapons.«

»Not weapons – terraforming!« she said, rolling her eyes.

»Whatever. So, you can't breathe our air and we can't breathe yours? And we both want this same moon?«

Dalgah nodded, slowly.

»And we each use weapons the other thinks are barbaric?«

She nodded again.

Gomez sighed, then sat down on a nearby outcropping of rocks. »So, what's next? Where do we go from here?«

»Don't… know, slug-thrower.« she said, still standing but motioning for her drones to stand down. It switched off the green beam and zipped over to her, parking itself in mid air.

»Stop calling me that,« she said, looking away. »I'm not even supposed to be here.« Her screen beeped again. Only six units left of oxygen, and seven of battery. Even if she switched her suit to low power mode and remained as still as possible, that would only buy her a few more of each at best. She looked up at Dalgah, now also sitting on another outcropping of rocks. »How much methane does your suit have left? What about power?«

»Not … enough.«

»Same here. Can you get more, at the colony?«

Dalgah shook her head and pointed in the opposite direction. »My team. Secondary research outpost … the other side. Power. Methane.«

»Fine. Then we go our separate ways. You go yours and I go mine.«

»It would not have … hurt you.«

»What?«

Dalgah pointed up to the drone. »It is a … geological tool. My assistant. Beam performs multispectral analysis on… soil samples. Can't hurt you.«

Gomez looked up at the drone, unsure whether to be impressed or offended. »That would explain why you never fired back at me. Nice bluff.« It nodded at her.

»Lucky for me you are … lousy shot,« said Dalgah.

»Believe me, I know. Well, so long.« She turned and started toward the colony.

As she turned, Dalgah glanced at Gomez's display. Her expression changed. »Wait!« she sighed. »Too far. Won't make it.«

»What? Are – are you sure?«

»Won't make it.« She motioned toward her outpost. »Closer. Can make your oxygen, too.«

»Oxygen?« Gomez stopped. »You can make oxygen there?«

»Already have, for … atmospheric experiments. We will give you oxygen. Power. Beacon to call for … orbital transport. So you leave. Just… leave.«

»Works for me.«

»Gomez Lieutenant, you … tell your superiors. You give them a message. Not murderers. Scientists. Explorers. Tell them, you are all … trespassing. Don't belong here. You tell them that.«

»Fine, but I don't think they'll believe me. I'm just in Logistics & Supply. I'll be scrubbing latrines when I get back, if I'm lucky.«

»Tell them.«

»Wait, what if this is all some big trick? I go with you, then I suppose your 'defense forces' will just kill me, right? Or, take me prisoner, toss me in a cell somewhere and do terrible things to me?«

»What?« said Dalgah, exasperated. »No killing. No cell. What is 'terrible things'?«

»Because, y' know,« she said matter of factly, gesturing to her body. »I mean, I got all this goin' on.«

Dalgah looked incredulously at her, paused, then stifled a laugh.

»Ok, right. Fine. Just forget it,« she said, slightly miffed and looking away. »I've had a stressful day and almost died twice already. My mind wanders.«

»My superior – he is an … asshole. Not a bastard,« Dalgah said, shaking her head.

»Well, we got that much in common, particularly some of the women I work with,« Gomez said, smiling just a little.

»Women? Assholes?« Dalgah said, clearly perplexed. She shook her head. »No. Men. Men are… assholes,« she said, making another first and smacking it down on her outstretched palm. »Always telling us what to do, like they know best. Always … explaining things we already know. Assholes.«

»Girl, it's called 'mansplaining' and they've been doin' it since the beginning of time. They can't help themselves, really. It's part of their DNA. Look, men are definitely assholes – with the possible exception of Todd – but sometimes women are, too. Seriously. I need to tell you about Commander Park. But first, I really need to pee …«

Dalgah nodded, waited, then motioned toward the outpost. She pressed a button on her wrist and recalled the drone, which quickly flew down and folded back into her harness. They turned and headed out, casting long shadows under the setting suns.

Space Mechanic

JIM HENDERSON



Jim Henderson is a Colorado writer of fun, varied, and sound science fiction adventures of various types. He is the author of the 9-book Mantis Saga, the story of the crew of the scout ship Mantis, as well as Viper: Boat-571, a military sci-fi adventure. Most recently, he published Inspector Giskard, a sci-fi mystery set in Colorado. Fun, adventure, aliens, space combat, robots, humor, and excitement abound, with deeper themes, character evolution, intrigue, mystery, and even romance. Jim is an Air Force veteran and cybersecurity

So, I was doing my morning checks. I looked at the potential collision data of debris and satellites in low earth orbit, watching to make sure that nothing looked like it would hit any of the eighteen trucks we had out. The collision were, as always, all clear. The guys down in the home office in Colorado already check all this stuff, as do the international space tracking groups. I'm just set the hundredth pair of eyes or something.

Anyway, it all looked clear; none of our trucks were in danger, and I could go about my business. But while I was looking at the last of those, a new alert appeared – flashing red in the upper corner of my screen. It was a new, probable collision! What made it worse, it wasn't with one of our trucks; it was with me, er us, er this station. Some piece of debris had apparently been knocked out of its orbit and was headed straight for the space station with a likely collision in six hours!

At almost the same second, I took all that in, I got an urgent call on the station net, »Bob, this is Ops. We need you in the Ops conference room right now! It's big.«

I wouldn't argue under any circumstances, but I knew they had just seen that same alert. I could imagine the guys in Ops were freaking out. I knew I was starting to.

I got up, stretched my back, grabbed my notepad, and headed off toward Ops, pushing myself quickly along as I floated through the zero gravity passageways. The lovely, young Tracy from the cafeteria gave me a strange look as I hurried past, as I wasn't typically the hurrying type, and was usually busy in my office at this time of day.

I'm Bob Matiag, a cool guy of thirty-five. I'm officially called a space systems engineer, though I'm essentially a glorified mechanic. I'm up here on the lovely Reef Two commercial space station, about three hundred miles above the earth. There are about one hundred twenty people up here at any time working for about twenty different companies. These include everything from a cafeteria and a hotel to several businesses that do unique zero-gravity manufacturing, botany, and so forth. I work for Astrofix Orbital Services, managing and fixing a fleet of space 'trucks' as we call them. I've got several different kinds, but in general, these are space vehicles that look a bit like a big satellite. We send them out to mate up with other satellites in orbit to either refuel them, fix them, push them to a different orbit, or deorbit them – send them crashing down through the atmosphere to burn up. Once in a while, we even recover a satellite to reclaim a small, key component and recycle the rest.

Controllers down on Earth do most of the work sending the trucks where they need to go, making sure they meet up, etc. My job is to provide backup direction from orbit when necessary and to maintain the trucks themselves. So, after several missions, the trucks will get sent back here to the station. Then I'll do tests, repairs, and upgrades on them. I've got two docked here right now. The plan is to send one of those, Truck-17, out shortly so it could rendezvous with a communication satellite and refuels it. The other one, Truck-2, is what you might call a 'hangar queen.' It's had some issues and has been docked here for almost six months. During that time, I've had to cannibalize it for parts several times to fix other trucks. It's theoretically usable but not in the best of shape.

Anyway, I live up here on the space station and have been here for almost two years. That's a long time as most of the people rotate out every four to six months, but it suits me. I'm in zero-g most of the time but spend at least a couple hours a day in space station sections that have some artificial (spin) gravity. That makes some tasks easier and helps keep me from 'wasting away' from the lack of gravitational resistance. There are enough people up here for there to be a little society and have something resembling a social life.

professional. He is an aficionado of science fiction books, movies, TV, and games. When not working or mentally exploring the universe, he enjoys hiking, kayaking, gaming, and his 8 grandchildren.

Anyway, I got to the Ops conference room quickly. It wasn't a conference room in a traditional sense. The primary station controller, Doug, was strapped into a seat, as was the station commander, Francois Douhet, next to him. They stared at a bank of large screens on the wall. All the rest of us just floated around at all angles so we could see the screens and see, or hear, what was going on. In addition to the station crew, Tommy Brown, the pilot of 'the bus' – the personnel transporter spacecraft that went back and forth to the station, Chris Chew, the head of the Business Bureau that notionally represented most of the businesses, Julie Li from station facilities, Brenda Carlisle, the manager of the thirty-room hotel, and me. I wasn't quite sure why I was there, though I did have a couple spacecraft (the trucks) docked there.

Douhet started off as soon as most of us had floated into the room. He pointed to one of the screens on the wall, which was actually the ceiling from my lopsided floating position. It showed the orbital path of the station and a track for what I assumed was the orbital debris, heading almost straight at the station.

Douhet spoke in English, the 'lingua franca' here, with a stereotypical French accent. »As you probably know, we've received alerts showing a sizable piece of debris, part of a rocket fairing, heading almost straight for us with an estimated intercept of six hours.«

Tommy Brown wasn't caught off guard, as he'd no doubt seen the alerts too, but asked questions. »What's the probability of impact?«

Doug looked up and said, over his shoulder, »Eighty-two percent.«

Tommy went on, »And is there an estimate of damage?«

Douhet pointed to the screen. »I've got the European Space Tracking Office on the line.« Then he said into a mike, »Go ahead, STO.«

A clipped, female voice from the STO came over the speakers with a faint Germanic accent. »The damage is hard to estimate but the closing velocity will be substantial, yielding a high total force.«

Another voice came over the speakers, a man with an American accent. »This is Reef Control in Florida. We're still working through the models on likely collision angles, velocities, and locations. We'll know more soon, but damage would be substantial, with probable destruction of one habitat module and likely secondary damage elsewhere.«

Brenda Carlisle looked extremely nervous, and her voice was rather urgent when she spoke. »We don't need to talk about damage. It needs to miss.« She looked furiously around the room, looking for an answer. »Can't you just fire rockets or something and make it just miss us?«

Reef Control came back on. »Ma'am, we're calculating a burn now. However, it's likely too late to ensure a miss, though we hope to reduce the likelihood.«

Douhet spoke up, establishing control. »We're working on a burn, and that may help. But we're here to discuss options.« He looked around the small audience. »Does anyone else have any ideas?«

Julie from facilities said, »Can we evacuate if necessary?«

»A small amount if that becomes necessary, but we don't have nearly the vehicles to get everyone off —«

Brenda interrupted in an almost pleading tone, »But someone can come help us, can't they?«

Douhet exuded calm. »That's not likely in time. As I was saying, we have two capsules docked, each could take four people. Mister Brown's shuttle bus is also here. That can take eight —«

Brown interrupted more deferentially, »Uh, sir, ten, in an emergency.«

Douhet went on, unphased, »Ten. So that gets eighteen people off, which is just over ten percent. So, we'll consider that if necessary, but it's not a great solution especially considering this is a multi-billion dollar station.« He looked around. »Any ideas for reducing the chance of collision further?«

Everyone looked around awkwardly, hoping someone else would come up with something.

Finally, Chris Chew spoke, »I don't have anything on that, but does anyone know why this debris suddenly headed our way? It wasn't coming for us yesterday.«

The lady from the STO came back on. »That's being investigated. We do not know at this time.«

Chew went on, »But we need to know, right?«

Douhet straightened himself and spoke louder to reassert control. »Yes, at some point it will be important to know. At this moment, avoiding destruction is far more important.« He paused and looked around. »So, again I ask – are there any ideas for reducing the likelihood or severity of impact?«

There was another awkward silence. I had a couple possible ideas but couldn't bring them up without talking to my company.

Finally, I said, »I have a couple thoughts, but need to discuss with my company.«

Douhet nodded, »I understand. That might be true of others. In a minute, we'll adjourn so we can all check back with our leadership. I will put out a brief statement to the entire station. Everyone, please, work to avoid panic.« He turned toward Li. »Julie, work with Miss Carlisle and Mister Chew to develop a proposal for who we would evacuate —«

Brenda started to interrupt, »Sir, we've got to evacuate our guests —«

Douhet went on, more loudly, »Work with Miss Li. Again, I'll make an announcement. Everyone, go back to your area, and work on options and on staying calm. Please ensure you always have someone on the communication net.« He looked toward me, »Bob, I look forward to hearing your company's thoughts, as well as anyone else with good ideas. Dismissed.«

I groaned inwardly. Great, no pressure.

The meeting broke up, people chattering to others as they floated away.

I hurried back to my 'office.' This consisted of a small repair bay where I could work on a recovered satellite or test things for the trucks. I pulled myself past the workbench and into the seat at my desk. I strapped in to keep from floating away and put on my headsets.

When I'd been in the meeting, I'd gotten multiple messages on my watch, but figured the local situation took precedence. As soon as I put on my headphones, I could hear the ops center

at Astrofix speaking urgently, »Bob, Bob, what the hell's going on up there?« That was Drew Smith who was a bit of a jerk.

»I got summoned to the principal's office so to speak. We've got a situation here.«

Drew said in frustrating, »We know, that's why we've been frantically trying to reach you.«

»Yeah. No surprise. I'm gonna need you to grab the Ops Lead. I need to discuss a few ideas.«

»I can relay that. What are you thinking?«

Since my life was apparently in danger, I was frustrated with Drew already. »Look, we're running short of time, just get him or the dang company president. I don't have time to repeat this stuff or wait for a committee.«

Drew didn't immediately say anything, but I imagined him debating what to do. I knew he'd want to stand on his dignity, but the chance of trouble overcame that. He said resignedly, »They'll be right here.«

Since the line then went dead, I did some status checks on the two trucks I had docked. Both were fueled but Truck-2 was missing several components. I tried to do some crude thrust estimates, but I knew I didn't have enough info handy.

Finally, a few voices came on the line. »This is the Ops Lead.«

This was followed by a demanding voice, »This is Horatio Blue, Company President. Now, tell us what the hell is going on up there.«

Great. Well, I had asked for leadership. I guess I got it. »Sir, as you know, a sizable piece of debris changed course and is headed right for Reef Two. Station leadership is working on a burn, but it won't guarantee a miss. They're trying to calculate substantial damage, but it sounds bad and I'm guessing it would hit on my side of the station.«

Blue went on, »Then what are they doing to resolve things further? They have a responsibility to us as their customer."

That sounded a bit crazy to me. It's not like the station *wanted* to be hit. I paused to keep as much control as possible over my frustration. »Sir, they're looking for any options we might have.« I paused. This was it. The company probably wouldn't like my ideas. »If you're amenable, we can offer up

for Truck-17 to reposition and do a burn, then depart. Also, we might be able to rig up something with Truck-2.«

The Ops Lead cut in. »Will a burn from a truck be enough?«

»I don't know. I don't have enough detail to calculate, and I didn't want to bring it up to station leadership without talking to you. It can't hurt.«

Blue cut in, »Would our truck be okay, then?«

I've got to tell you, I was greatly touched by his concern for my safety. Or I would have been if he'd shown any. I fought back anger but probably bit off the words, »Yes, *the truck* would be fine.«

The Ops Lead, Joe Bell, cut in, wanting to get at solutions instead of argument, »What are you thinking with Truck-2?«

I said calmly, »I thought we might be able to rig it up to intercept the debris.«

»It's not specifically configured for that and intercepting a complex, spinning piece of debris takes time and planning.«

»Yeah, I know. It might not be a controlled intercept—«

Blue cut in. »What are you saying? Are you proposing we sacrifice one of our trucks. Do you know how much those cost?«

»Yes, sir, I know exactly how much they cost. You might want to give some vague consideration to the multi-billion-dollar station I'm on as well as to the hundred-plus people. They might not mean anything to you, but they might be worth considering as more than a dang rounding error.«

There was complete silence. I wasn't sure whether I might get fired, but at that moment I didn't really care. The pause was extremely long, and I wondered what was going on. A few times I thought I heard faint talking in the background, but it wasn't aimed at me. Hopefully someone was talking some sense into Blue.

The Ops Lead came back on. »Okay, Matiag. Offer the burn and the possibility of using Truck-2. But don't commit. As you know, if it smashes into the truck, it might just cause more debris. You know, Kessler Syndrome and all that.«

He was talking about the idea, proposed by some guy named Kessler at NASA, that collisions between orbital objects

could cause a cascade in which each collision generates space debris that increases the likelihood of further collisions. That is, a collision between two things could create a bunch of small pieces that could then run into other things. Any solution we came up with had to consider that.

The Ops Lead went on, We'll be checking some stuff here with Reef Ops and others.«

I waited, expecting Blue to say something. There was nothing but awkward silence as I didn't really have anything else to say.

Finally, the Ops Lead said, »Well, get on it. We'll get back to you.«

I had to consider that. I wasn't quite sure what happened there. Did Blue just step away in frustration? Did someone convince him to get a clue? Did he think he had more important things to do? I wasn't sure, but I had to worry about the possibility of impending death, so I just decided to ignore the company for now.

I opened an audio line with Doug in Station Ops and Douhet. »Mister Douhet, this is Bob from Astrofix.«

Douhet answered with what seemed to be some excitement in his voice. »Yeah, Bob. What do you have? Any good ideas?«

I cleared my throat before speaking. »I've got one idea and one long shot.« I decided not to keep him in suspense, so I went on. »My company has authorized me to use one truck if doing a short burn with it will help. I honestly don't know if the thrust is enough to help much or not.«

Doug cut in. »I was hoping you'd consider that. Can you shoot me your thrust specs and I'll see how much impact it could have on the whole station.«

»Sure, I'm shooting you our thrust specs now.« As I said the last word, I hit enter to send him a short document outlining the thrust characteristics of our trucks.

Douhet interrupted this exchange. »And that other, long shot idea?«

I paused to make sure I didn't say this wrong. »I'm trying to work up some ideas on whether I could use our other truck to perhaps, uh, try to catch or divert the debris. If you think that

could help, I'll work up some ideas and we can discuss them.«

Doug said anxiously, »It's worth considering. Send us what you're thinking.«

I fumbled around for a few minutes, mixing truck images from my documents with some crude, hand-drawn shapes. These were terrible but they depicted the two ideas I had. The first was that we send out Truck-2 in the path of the debris so it would hit the truck instead of the station. I knew this wasn't a great option, because of the whole chain reaction thing, but it might be a desperation move to save us. The second was that we rig up some kind of crude net on Truck-2 and have it try to 'catch' the debris. Other space vehicles had used this kind of technique to recover debris, but our Trucks weren't set up for that and Truck-2 was missing parts of its manipulator arms. In either case, I'd have to work with Astrofix Ops to plot or control the thing, and I didn't think they'd like it. In any case, I sent both pics to Station Ops. They, or Reef Ops, could argue with Astrofix at least as well as I.

I got a call a couple minutes later from Doug. He didn't sound impressed. »Bob, that's some, uh, interesting stuff. Your first option is probably a 'no go.' If you rammed one of your trucks into the debris, it'd either create a lot more debris or just deflect the thing into another path. In either case, that might be trouble for us and a lot of others. That might be okay if this was occurring up in the range for Medium or Geo orbits where there's a lot less stuff, but I can't see anyone buying off on that for here in the very crowded Low Earth Orbit.« He paused. »That second idea could work, but do you think you can pull that off?«

»I'm not at all sure. The truck's not set up for that, so we'd have to jury-rig something, and Astrofix Ops would have to program or control it. I can't make the truck do that kind of thing by myself.«

He sounded interesting but skeptical, »Well, call your folks and see whether you can come up with something workable. We're hoping that our burn, coupled with yours, could help, but your catch idea could be our 'ace in the hole.' Let me know.«

I cut my connection and was getting stuff ready when Douhet came over station speakers. »Reef Two, this is an announcement from Francois Douhet, Station Commander. We have been notified that a sizable piece of space debris is on a course that might intersect with the station. We are taking steps to ensure that doesn't happen. As part of that, you'll feel a thruster burn in a few minutes. Do not be alarmed. We are doing everything possible to ensure station safety and will provide additional updates as the situation is resolved.«

I had to chuckle since that seemed to downplay the severity of the situation and that resolution seemed far from certain. However, I knew that he had to keep people from panicking.

I sent my two ideas to Astrofix Ops and waited to hear what they'd say.

It didn't take long for Drew to come on-line. »Bob, that is a complete no-go on the 'ram into it' option. The risk and liability would be immense. It might avoid Reef Two being hit by a big piece of debris but would likely mean thousands of smaller pieces hitting Reef Two, other stations, or satellites. That is totally off the table.«

I just said, »Got it.«

He went on. »The company is negotiating with the Reef company on that burn. We'll let you know soon when you need to undock that truck and position it to burn.«

»Roger.«

»Finally, our engineers down here will bounce around concepts for your 'catch it' idea. They don't like it, but Astrofix is considering it as a fallback option as long as everyone absolves us of all liability.«

I grunted. That sounded like Blue's brand of compassion at work, but it wasn't unreasonable. The last thing we needed was to try to 'save the day', then for something to go wrong, and suddenly we're getting sued by half a dozen companies or governments.

I closed, trying to stress the urgency. »Understood but get back to us soon. We're under five hours now.«

I ran through a checklist to ensure that Truck-17 was ready to reposition and burn. My checks first thing this morning had already covered that, but paranoia suggested doing it again. Then I headed for the cafeteria to grab a quick bite because I was starving.

The cafeteria was a small place in a portion of the station that had thirty percent of Earth's gravity. The gravity wasn't what one would call 'normal' but it was enough that I felt it and that your food didn't float away. I got a spicy breakfast burrito from Tracy who was looking particularly lovely this morning.

As she gave it to me, she leaned in and paused for a second. She looked worried. »Bob, is everything going to be okay?«

I wasn't sure what to say since I couldn't be sure of that, but I could see that she wanted reassurance. I chose a middle path between lying outright and stoking her fears. »We're all working on it. The station's doing some stuff and then I'm going to do some stuff. Hopefully, that'll improve things a lot. In any case, they'll reposition people to avoid immediate danger.«

She smiled brilliantly though I couldn't tell if she believed me. »Thanks.«

Man, she was pretty. I swore to myself that, if we were both here when this was over, I was going to ask her out. That gave me at least a fantasy to look forward to. I felt the slight rumble of the extended burn of the station's rocket boosters. That reminded me that I needed to be quick, so I was done eating and headed back to my desk before the burn ended seven or eight minutes later.

I soon wound up in a multi-party call between Doug in Station Ops and several people at Astrofix Ops. They calculated that the station's burn had accelerated us slightly and pushed us into a slightly higher orbit. It would definitely help, but they figured it was likely too little, too late. Even with all the station could do, the probability of impact had only gone down to forty percent. That was still far too high for anyone's liking.

So, they all went back and forth on details for a burn from Truck-17. It had considerably less thrust than the station's burn but could burn for several more minutes and give us a little

more leeway. I was a by-stander for most of that conversation since Astrofix Ops would initiate the burn remotely. I had the capability to control the burn from here, but they felt they could better coordinate with Station Ops. That made some sense, but I think they may have also wanted to ensure that I didn't 'overdo it' and burn longer than they were comfortable with, putting the truck at risk. Whatever. I was directed to reposition the truck for that burn, so I got to work on that.

This entailed me directing clamp release after Station Ops did the same. I then monitored everything about the truck as gentle air from the docking port pushed it away. It inched its way from there over to docking Alpha with some small thrusters, and then initiated a docking, in concert with Station Ops. I monitored dozens of variables as this happened and everything looked good. Once docking was complete, Astrofix Ops sent up thrust burn parameters and initiated the burn at the direction of Station Ops. It only burned for three minutes and was substantially less powerful than what the station had already done, but it helped move the station a bit. By the time the burn was done, the probability of impact was down to nineteen percent. That was much better, but still too great a risk.

Once the burn was done, we decoupled Truck-17 and Astrofix Ops sent it on a slow course away from the station. It would now be safe, no matter what happened to us. We were now down to under four hours to impact and far from safe.

The multi-party call continued, and the company and the station bounced around ideas for modifications to Truck-2. Ultimately it was agreed that I would go out in a spacesuit, weld four ten-foot crossbeams onto the front of the truck, and then bolt a cargo net to these crossbeams under tension so it created a net about eight feet in front of the truck. I wasn't at all sure of this, but I had my orders. I'd need to get a hand, though, there was no way I could do all that by myself in the time we had.

As I got ready, I had to reposition Truck-2 so it was facing away from the station instead of into the station. I was glad to see that went well because Truck-2 had been having some issues.

Frank from facilities would accompany me on the EVA (extravehicular activity) since it was more than a one-person job. Normally, any plan for EVA would require at least twenty-four hours notice, an extremely detailed plan, and a lot of testing. This time, all of that was dispensed with. Frank and I checked each other to ensure our suits were on and operating correctly and that we were both properly tethered. Then an airlock was opened to let us outside bearing a small tool kit.

I had done almost twenty EVAs, so I'd done most of this before. However, I had far less time to admire the stars and far more work to do in a short time. Station Ops personnel had positioned the beams and cargo net so they were sitting inside an open hatch. I was tethered in two places – to the air lock I was using and to Truck-2, while Frank was tethered at the air-lock and to the open hatch.

Now, the real work began. Frank used a combination of tether movement and hand-over-hand along the station body to carefully move the first beam forty feet from the hatch to Truck-2. He then held it while I started the welding, then left while I finished. I got the first beam painstakingly welded along Tractor Two's frame so that it stuck out at something like a forty-five-degree angle. It was far from precise, but it was the best that could be done in the short time remaining.

We then repeated the process with one beam after another, each one taking just under twenty minutes. When we were done, there was a large, bent X shape on the front of good ol' Truck-2.

Then it was time to put the cargo net on. Frank brought the net over to the truck and we worked together to attach a corner to each of the crossbeams. This was a bit of a pain because none of the materials were really designed for this, so it wasn't like putting a bolt in some pre-built beam. The first one took about ten minutes of struggling but we had the process down for the next ones. What got more complicated was when we had to apply a bit of tension. Frank and I had to go back-to-back so that I could work on the bolt while he pulled the net toward me. He lost his hold a couple times and we had to re-position several times. Finally, it was done. There was a bit

cargo net hanging loosely over the crossbeams, forming a loose square several feet in front of the truck.

We sent in a bunch of pictures and waited while both Station Ops and Astrofix looked at how it had turned out. None of them were happy but all eventually agreed that it was 'good enough.' Believe me, it's not comforting to stake your life on something that's grudgingly considered to be 'good enough', especially when any problem would arguably be *your* fault. That being said, there was realistically little else we could do given the time available.

Frank and I went back in the station, and I thanked him profusely for his help because I couldn't have done all that alone. At the very least, it would have taken a whole lot longer.

As soon as I got back to my desk, Astrofix was on the line. It was Suzanne Opa, one of the main truck engineers. »Bob, we've seen that you made the modifications to the truck. While you were doing that, we've been working on the software. As you might guess, the tractors aren't programmed to try to 'dock' with something that could damage them, nor something that's spinning like that debris seems to be. We've made the mods so it will do that, and we're running through a bunch of sims now.«

»What do I need to do?«

»Once we're comfortable with the software, we'll send it up to you and it should automatically install. I need you to verify that Truck-2 takes the update okay, especially since it's not in the best shape.

»Will do. What else?«

»We're also putting together kind of a strange intercept path. The truck will leave the station, head toward the object, and then speed up to nearly match the debris' vector. The goal is to have the debris intercept that net you made with near-zero closing speed. But you'll have to do fine control from there. We don't want a problem because of the few seconds delay we might have from here.«

That all made sense to me. »Then what do we need the truck to do?«

»That required a lot of debate and might still change. Basically, if the catch goes as planned, Truck-2 will take the trip to push it to deorbit and burn up.«

»Do you think the truck will be okay to do all that?«

She grimaced. »It should be …« She trailed off.

I prompted her, »But?«

She smiled faintly then said, »If it has trouble, the truck might just have to take the debris into atmo.«

Wow, they were considering having the truck crash through the atmosphere with the debris, getting destroyed in the process. I was a bit surprised at that, though I should have known. »Do you mean burn up?«

»Yeah, probably. That's obviously not the plan, but we've negotiated the implications of that possibility.«

It took me a minute to figure out what that meant. It probably meant that folks that owned Reef Two agreed to pay Astrofix if one of their trucks had to be sacrificed. That wasn't totally unreasonable.

»Got it. I'll make sure the truck's all ready.«

She smiled, »Well, you did the hardest work and now you have the final controls. Other than that, just be safe and work with the station folks.«

As you might guess, the next hour was dang hectic. Douhet and the station folks finalized who would leave the station. This included mostly guests at the hotel, and the shuttle bus headed off with them. A few station personnel were put in the capsules and those would leave the station about twenty minutes before the debris would arrive. Tracy was among those in the capsules, so I was glad she would be safe, no matter what happened.

The software modifications uploaded to Truck-2 and installed fine. It looked to be ready to go, or as ready as a crazy Frankenstein creation could be. I wished it luck. It left the station thirty minutes before debris impact and headed out. I watched the truck's progress in Station Ops because everyone in the aft habitation module, including me, was evacuated to other parts of the station and all the airtight doors were sealed. Even if the debris hit, Douhet thought we'd be safe in the other parts of the

station, but it was impossible to be sure. I hoped I'd have an office to go back to because all my gear was in there. The office served as my workplace and also my main quarters. When the last mechanic had left, I'd converted an old storage room into sleeping quarters. It wasn't great, but I had more room and more privacy than most people on the station, and I could get up and work in my pajamas if I wanted to.

In Ops, I was strapped into one of the controller stations, several screens up so I could send Truck-2 fine adjustments. I watched the path of the debris like a hawk. As the debris got closer, the probability of impact increased because the debris' path became clearer. It was nerve-wracking, watching something that might damage or destroy us move inexorably towards us.

For all the troubles I'd had with Truck-2, it seemed to be working fine. It decoupled from the station, turned and did a burn to get to a point about fifty kilometers between us and the debris. Once there, it turned, and did a burn to match the debris' velocity. Finally, it turned so the net was between the truck and the debris. There were a lot of people on the line during this – the station, Ops, the STO folks, and others. The path was everything. If we kept Truck-2 in the debris' way, this might work. If the debris came around it somehow, we were in trouble. I made periodic little adjustments to ensure it was in place, with Astrofix kibitzing me all the while.

There were a couple other shuttle 'buses' headed our way in case survivors needed to be taken off, but they wouldn't arrive until several hours after we'd either been hit or missed.

As the debris came ever closer, it became clear it would intercept Truck-2 three kilometers from the station. That was closer than anyone would like, but it took a while to get Truck-2 to match the velocity and get on the precise path.

Ops started a countdown as the debris approached the truck. »Five hundred meters. Four hundred.«

The debris loomed large in the camera feed from Truck-2 as it came onward, straight toward the truck. It was a twisted part of a fairing about three meters square, tumbling as it came.

The countdown got faster, »Sixty, fifty, forty, thirty, twenty, ten, and intercept.«

Truck-2's feed went black a few seconds before impact, and everyone held their collective breath. The station controller shuffled screens around to put the external station feed on the main screen, where the truck's view had been.

When the image resolved, everyone stood. The debris had hit the net, but it was tangled, and its momentum had gotten Truck -2 spinning. I worked the controls furiously, sending the truck short thrust commands to counteract the spin and slow the combined mass so it didn't still hit us. First, I got it slowed so that it was no longer approaching us. Instead, it was spinning like a top out there. After a furious series of commands, I was able to slow the spinning and roll so it almost came to a stop, relative to us. I was sweating like crazy by the time it was stable.

Astrofix Ops came on the line. »Good job establishing control. We've negotiated a safe path with STO. Now send the truck the path to push it to deorbit.«

That was easy and the truck started pushing the thing to slow it down, which would automatically lead to a lower orbit. The occurred over thirty minutes, and we lost direct line of sight. We got a feed relayed from another station as Truck-2 approached the point where it would try to get rid of the debris and send it through the atmosphere.

It didn't work. The debris was tangled in the cargo net. We tried to have Truck-2 shake and shimmy in hopes of getting it out of there, but it didn't work. Either they were both going to the atmosphere or neither was.

Astrofix Ops came on. »Team, we've decided that Astrofix Truck-2 is going to have to 'ride in' the debris. Both will be largely burned up in reentry. Any remnants will land near Point Nemo in the South Pacific. It's been a harrowing day, but together we've saved the Reef Two station. Thank you all.«

Everyone breathed a sigh of relief and some cheered. I was relieved, but I was also sad that Truck-2 had to die to save us. In my book, he died a hero.

There would be a little celebration in a couple hours, but I went back to my office to relax, shower, and change. I was

exhausted, but I wanted to meet those two capsules when they docked back at the station in an hour or two. I was bound and determined to ask Tracy out when she came back on board. I wanted more than just survival out of this whole episode.

Primordial Soup

MIKE JANSEN



Mike Jansen has published in Dutch, German, Romanian, Estonian, Polish, Chinese, French, Finnish, Russian, Swedish, Catalan, Spanish and English anthologies and magazines. Since 2011 he has published over 100 English language stories in the U.S., U.K. and Australia. In addition, three fantasy novels, two story collections and several novellas in Dutch, a novel and a short story collection in English. He has won the Dutch King Kong Award 1992, an honorable mention for the Australian 1998 Altair Magazine launch competition, in 2012 the Baarn Literary Prize

Jesus Almada Gutierrez Alvarez the Seventh looked out over the Cerulean Ocean that stretched from below his balcony to the horizon.

Life on Garuda III could be harsh, but for a member of the powerful Alvarez family many doors opened easily. However that path would have been too easy. Boredom was an ever present threat. It was the reason he had started a Quizling Bureau: 'No question is too vague!' was his motto. He rarely received questions that couldn't be solved in a few days with some Web sleuthing.

»Busy?« came the tinny voice of Navodny Hekelbareth behind him.

»Nah. Which housekeeping bot did you seduce this time to open the barrier for you?«

»Harrumph, I say, I am here on a mission for the Sekretariat. The idea alone that I would stoop to something like that ...«

Jeses interest was piqued. A drone that was allowed to cross privacy barriers was rare. »It happened before.«

»Don't remember,« Navodny said while hovering next to Jesus at head height.

»Spill it, drone. What is this super duper double secret message from the Sekretariat that they couldn't send it via personal message?«

An electric field appeared around them and the outside world was silenced and hazy.

»A secrecy field, Navodny? Must be important then. Do I need to sit down?«

»Don't be ridiculous. We're not in one of those Old Earth corny detective series.«

Jesus indicated the drone to continue.

»We've received a message from our research station *Nautica Subcutanea*.«

»Nice name. Personal choice?«

»Class IV AI. They have a weird sense of humor. She leads a research mission into the Pajero Cloud, a few light years from here.«

Jesus shrugged. »What can I tell a Class IV that she doesn't know already?«

»We wondered about that. The images they sent us were quite educational, if you like vivisection.«

Jesus looked aside. »Vivisection? How should I see that?«

»Like I said it. People falling apart into small pieces, stripped layer by layer of skin, muscle, organs, bones. Yet no visible culprit, no sign of any tools or equipment.«

»How many on board?«

»Seven.«

»How many dead?«

»Six. The last one will be relieved in two days. A Gargantua class cruiser is coming to Garuda III to pick you up. You will arrive at the same time as the freighter.«

Jesus whistled. »A Gargantua class? For me? And you think I'll just drop everything and agree to accepting this assignment?« A memory surfaced in his mind.

»You're always bored. Our estimation of 97% certainty of you saying yes was enough to get *Barsende Gevvalt* to alter its course.«

Jesus sighed. »That's what I thought. Again? What is it with that ship?«

The drone laughed a mechanical laugh. »He writes essays about 'special humans' and he apparently decided you're one of those.«

»Do you have any idea how annoying he is? He keeps asking stupid questions.«

»And you keep answering them, again and again,« the drone said. The secrecy field switched off. »Your transport is descending from orbit, get your things, you're leaving in five minutes.«

and the prestigious Dutch Fantastels award, in 2020 the GP Scifi/Fantasy Award and in 2021 the Mossy Statue prize for best promoter of Dutch SF, F and H. Since 2016 Mike organizes the Dutch EdgeZero awards, an attempt to get the best stories from Dutch language genre contests and magazines of the previous year collected and published in a year's best anthology. So far eight anthologies have been published. In addition he publishes themed anthologies showcasing the best Dutch authors. Some of his recent work has appeared in Samovar and Strange Horizons.

A journey with *Barsende Gevvalt* was as boring as Jesus had anticipated. Despite repeated attempts to hide, the ship knew where to find him, so he had questions asked of him in the weirdest locations and at the weirdest times: A mechanical bird flying by, an improved cat, a traffic robot, an information kiosk and even some of the people he met on board of the ship.

From the bridge of the cruiser the Pajero Cloud was an impressive collection of light emanating gas and dust clouds where hot young stars caused interesting color patterns that twisted across light years into curls and vortices to form a blinding kaleidoscope of colors.

The *Nautica Subcutanea* seemed dull and grey in comparison, a collection of tubes and habitats surrounding the original research ship which formed the core of the construction. Compared to the immense cruiser it seemed just an insignificant insect.

Jesus went to the departure hangar.

»Thank you for your mindful responses, mister Alvarez. I/we will be just around the corner, should a quick retreat be necessary.«

Jeses snorted. Just around the corner for *Barsende Gevvalt* was still almost ten light years. »Just keep your scanners open. Just in case.«

The messenger drone grumbled assent and left the hangar where the shuttle waited patiently until Jesus had boarded.

Inside the *Nautica Subcutanea* he was met by an identical messenger drone. This one had a clearly feminine voice. »Welcome aboard the research station, mister Alvarez.«

»Thanks, Nautica. Can I freshen up first, before we visit the crime scenes?«

»Of course. My drone will point you the way.«

They moved through tubes and corridors crafted from a variety of materials, ranging from metal to plastic and compressed stone. Gravity was kept at a comfortable zero point eight g.

The room Jesus was delivered to was spartan. A bed, a desk and a shower. A transparent plastane wall offered a beautiful

view of the Pajero Cloud. He placed his suitcase on the bed and got out his space suit, an active polymer that fit seamlessly around his body and offered maximum freedom of movement. He washed his hands and had them blow dried. Moisture and fungi were a continuous problem in space stations, even with the current advances in technology.

The messenger drone waited outside his room when he left it with his favorite notebook and pencil.

»According to the dossier the first occurrence happened in section B22. I would like to visit that one first.« Obedient, the drone led him there.

Section B22 was a fairly wide tube with white walls, part of which was sectioned off using orange tape and thin, opaque fabric. Through a simple flap Jesus entered. The drone followed.

This part of the tube was a dark brown red. There was a scent of metal.

Jesus investigated the spots and blood patterns.

»Nautica? Can you isolate victim one and project here via this drone, exactly where it happened?«

»Of course, mister Alvarez. His name was Jeng Zi Huan.« Moments later a transparent form of a young man appeared. Jesus estimated him end twenty, well built, wearing a coverall.

»Time duration of the moment this happened until the end of the procedure?«

»Two minutes, fourteen seconds.«

»Show me.«

The transparent figure seemed to keel forward. Clothes were cut away in strips, then came skin, fatty layers, muscles. Jesus saw clearly the muscle contractions of the body of the man as his skin was cut away. »He was conscious as this happened,« Jesus said. The resulting skeleton fell to the ground.

»What … what happened,« he swallowed, »… with the soft parts?«

»Collected by a cleaning crew and placed in a special container, then put on ice.«

»When did number two occur?«

»Nearly eight hours later. Room three-two-four. Leisha Harare was in bed, undergoing REM sleep.«

»Show me.«

The room resembled his own quarters. The bed had not been cleaned and the sheets were blood soaked, although dry now.

»Do we have footage of this one as well?«

»Partially. When I received signs of extreme stress from her implant I activated the sensorium.«

»Recording time and estimated total time?«

»One minute fifty seconds. Considering the speed of the process the estimated total time is roughly two minutes and one second.«

»Faster than the first, right?«

»Clearly.«

Jesus nodded and noted the information. This room also had a plastane wall that displayed the Pajero Cloud. He felt a momentary shiver across his spine. »Number three?«

»Nikola Mendelsson. D18. Just outside the observatory.«

»Bring me there. After that I wish to talk to the surviving crew member.«

The drone went ahead.

D18 was a spacious area with a tube running through the middle, while habitat parts were connected all around. Here too was a piece that was sectioned off with opaque fabric. Jesus had the scene played here too. This time he measured the time himself. »One minute forty six. It's accelerating.« He had the scene played over and over, at least a dozen times. »Can you compare the cut pieces? Size, width, height, length?«

»Compared to the previous incidents the reduction in size is a factor of five for each occurrence.«

»Please apply to the subsequent events.«

It was silent for a few seconds.

The drone grunted a few times, impatient. »With the next three size had decreased by a factor of five or more each time.«

Jesus nodded. »Take me to the survivor please. What was her name again?«

»Ellen DelaRocha, biologist, divorced, no kids.« The drone spewed more information while they traversed the station through tubes and corridors.

Sick bay was a separate module, containing all modern surgical equipment and a well stocked pharmacological printer. The woman lay on an examination table. She was fast asleep.

»I assume she is sedated?« Jesus said.

»She saw most of what happened. Sleeping seemed best for her. Especially if it should happen again.«

»I still need to talk to her. Wake her.«

Within a minute the woman started to roll her eyes behind her eyelids. Suddenly they sprang open and Jesus saw her fear.

»Ssht, relax, Ellen. My name is Jesus Alvarez, here on behest of the Sekretariat to find out what happened. Can you talk?«

Ellen swallowed a few times, then nodded. »What do you want to know?«

»First I would like to ask you if you have a clue about what happened to your colleagues.«

Ellen shook her head. »I saw Jeng and Lars fall victim to it. The rest I wasn't around. I …«

»You are wondering why not you, why they?« Jesus sighed. »Understandable. Lars was the final victim, right?«

Ellen nodded. »It was terrible. Like he disintegrated right before my eyes.«

»Different than Jeng, right?«

She considered his words. »Yes, right. Jeng was much cruder.«

»Any other observations?«

»No … wait, yes. Lars' head. I saw his skull being opened and his brain taken out. That did not happen with Jeng.«

Jesus made more notes. »Nautica? Who was number five?«

»Jenna Mbole.«

»May I make a guess? Skull lifted, brain in pieces removed?«

After a short pause: »That is mostly correct, Jesus.«

Jesus nodded softly. »Might I ask of you what a biologist is doing on board of this station, miss DelaRocha?«

»Of course. I research the complex organic molecules that are abundantly present inside the Pajero Cloud.«

»That sounds intriguing,« Jesus said. »Did you find anything special?«

»Yes, lots. The cloud is filled with complex carbon molecules with rare trace elements. The density is also much higher than

we initially thought. I've taken countless samples and there is so much still to find out.«

»Nautica, I have a suspicion. We will convene at the loading bay to discuss.«

»If Ellen agrees and does not rather go back to sleep.«

Ellen shook her blonde curls. »I've slept enough. I'm quite curious to mister Alvarez has to say.«

The messenger drone went ahead and half an hour later they entered *Nautica Subcutanea's* loading bay.

»Nautica, please project all six recordings next to each other right here, if that is possible?«

»Complying, Jesus. More than sufficient space in the loading bay.«

»Great, start playback then, on repeat please.«

One by one the transparent recordings began to play like a noiseless, macabre dance.

Jesus saw Ellen's eyes grow moist. »Horrid, isn't it?«

Ellen nodded.

»Our revulsion should not deter us from keeping an objective view,« Jesus continued. »We witness a refinement and acceleration after each subsequent incident. This indicated some form of intelligence. In the last two incidents we witness a novelty: the skull is lifted and the contents are scooped out in strops. This happened to Jenna. With Lars the contents seemed to disintegrate. But that did not happen. Deconstruction occurred nearly on a cellular level.«

»A drastic refinement then,« Ellen said.

»Indeed. And surprising too,« Jesus said.

»But how?«

The drone added: »My circuits must admit a modicum of curiosity.«

»We are missing something,« Jesus said. »I just do not know what, yet.« He looked at the panorama window that occupied a side of the loading bay and saw the colorful vortices of the Pajero Cloud. Then he looked at the continuing display of the recordings.

»Another question, Ellen, please?«

»Of course.« She sat on a pile of pallets.

»How do you store your samples?«

Ellen blinked. »Eh … magnetic containers. So that the molecules cannot be contaminated inside the ship's atmosphere.

»Complex organic molecules?«

Ellen nodded. »Surprisingly long carbon molecule chains. Deeper inside the cloud it's like flying through some kind of thick soup.«

»So funny you should mention that,« Jesus said. »Soup. Like some kind of … primordial soup?« He looked at her until he saw the light in her eyes appear. »You understand what I'm implying?«

»That … is impossible.« Ellen shook her head.

»Look outside. Can you explain the kaleidoscope? The complex patterns that are formed?«

»No. No, I cannot. It could be magnetic, electrical fields.« She turned paler than she already was. »And I've been cutting pieces from the cloud for the past few weeks.«

Jesus sighed. »My thoughts exactly. We think it's normal to take samples. Perhaps 'others' will also find that normal. Nautica, can you cut up people using a magnetic knife?«

Nautica's voice sounded inside the loading bay. »Confirmed. Humanity has used magnetic knives to dissect DNA and even single molecules.«

Jesus stretched his arm towards the panorama view. »Why shouldn't there be an intelligence out there that has the possibility of performing these actions? We have seen clear improvements between each dissection. Nautica, can you visualize magnetic activities around the ship?«

»The sensorium can measure down to Pico-amperes. Standard is full amperes because the resulting amount of data might flood the memory systems.«

»Can you generate an image of electrical fields in and around the loading bay. Then slowly increase resolution?«

After a short pause, Nautica projected a uniform mist inside the hangar. The improvement in resolution was slow but steady. First the people present and the drone lit up like purple clouds. A few seconds later colored balls appeared inside the loading bay, each color denoting field intensity.

»Maintain, Nautica,« Jesus said. He walked carefully through the loading bay until he reached one of the colored balls. He tried to touch it, but the object moved away from him just in time. Jesus nodded. He tried again, same result. »What is their energy source, Nautica?«

Nautica answered by displaying thin strands running from the balls to the wall of the bay.

»Think they're hostile?« Ellen said. »We did actually attack them and they have dissected several of our people.«

Jesus shook his head. »I think it's curiosity. Like kids finding something new. Until they discover there's more in their latest discovery than they first thought. Probably they only noticed the electric fields of our brains with the latest victims. Or perhaps the entire cloud is one big entity.«

»I think I'll soon release my samples,« Ellen said.

Jesus smiled. »That reminds me of the release of the dolphins and whales.«

Ellen looked at him. »You think the Pajero Cloud has a similar intelligence?«

»Who'll say? It took us centuries before we found out dolphins had similar IQ to humans and that whales were in fact more intelligent by a factor. Perhaps we humans are actually helping the Pajero Cloud achieve or increase its intelligence.«

Ellen nodded deliberately. »A beautiful thought. Now what do we do? Try and start up communications?«

»That seems a good plan. My quizling here is done. I shall report to the Sekretariat. Nautica, can you reach out to *Barsende Gevvalt*?«

»He is on his way, Jesus,« Nautica said. »He says he has many questions for you.«

Jesus sighed and his shoulders slumped. With mock derision he said: »Alright, one for the team, then.«

Beyond the Black Hole

ZACH SMITH

Fritz and Bertram sat in two different but essentially identical rockets, looking at the black hole in front of them. It looked just as the name described: a hole in reality, blacker than black, with occasional cracks of something like lightning across its surface. It warped the limited dim light of their dying universe around it while material in the accretion disk glowed as it rapidly circled the event horizon. From their point of view, it seemed to stand still, absorbing both light and time and even their attention. Sure, it was interesting to look at, and the two rocket jockeys couldn't look away, but more than just interest was drawing their attention. Physically, spiritually, and emotionally. The back hole was all-consuming. The universe was old, and black holes were everywhere, but this was still the closest Fritz and Bert ever came to one.

»You sure you want to do this?« asked Fritz.

»No,« said Bertram. »But I have to. There's no turning back now.«

»Actually, there is,« said Fritz. »We are just outside the gravity well, twenty minutes closer, yes. But if you want to go back, now's the chance.«

By minutes, he meant light minutes, about ten million miles.

»I know that, Fritz,« said Bertram. »And that's not specifically what I meant.«

»I know what you mean.«

»This is kind of it for us. They say there is a whole other universe inside there.«

»I can't see how that's possible?« said Fritz. »It's a lot smaller than a universe.«



Zach Smith is a short fiction writer from the northeastern United States and has been editing for InterNova for about a year. He has published more than one hundred stories, some of which have recently appeared in Nova, InterNova, New Pop Lit, and the Short Humour site. He is currently in the process of shopping around his first story collection, Tales Along Turtle-heart Road. His second and third collections will follow close behind. Aside from fiction, he is also a music composer, chess

composer, video editor, and collector. Zach was recently married and has a stepdaughter in high school.

»Everything gets warped, and the space inside is much bigger than the space outside. You remember the demonstration with the paper.«

Before the men headed out on their mission, one of the astro-philosophers gave them a piece of paper and a pair of scissors and asked them to cut a hole in the paper big enough to pass their body through.

They looked at the paper and the scissors and, without taking too long to reply, handed them back, saying it was impossible.

The astro-philosopher took the scissors and made a variety of cuts in the paper, which allowed it to be bent, tugging on the corners between the cuts to create a vast »hole« inside that (sure enough) he looped over not just one but both of the rocket jockeys.

The point of the demonstration was to show how there could be a full universe inside the relatively small space of a black hole.

»Yes, I remember the paper,« said Fritz. »But that was paper, and on paper, there might be a universe inside the black hole, but how do you know that? How does anyone?«

»I'm the one diving into the black hole,« said Bertram. »Are you trying to convince me not to?«

»I'm just worried.«

»So am I, and I'm the one doing the thing. It's not for you to worry about.«

»I'll always worry about you.«

»I know, Fritz … thanks.«

»This new universe theory, it's just a theory. What if they're wrong? Do they even care if they are? Maybe they're just sending you out here to be rid of you.«

»Who would want to get rid of me?«

»I don't know, Bert,« said Fritz. »But it's not impossible.«

»Yeah, maybe, but if someone wanted to get rid of me, there are easier ways to do it.«

They were rocket jockeys. They were not the best and the brightest the Zustrillians had to offer. They knew how to fly and were willing to take risks for the betterment of all, and

maybe that did make them the »best,« but they certainly were not the best educated and were somewhat emotionally stunted. The conversation that Bert and Fritz had at the edge of the black hole was more profound than they had ever gone before, emotionally speaking. And if they returned, they would deny the conversation ever happening.

»Don't forget, in ancient times, black holes were only a theory on paper, and now we're looking at one.«

»It is amazing,« said Fritz. »Still, though, you don't have to do this.«

»I have to,« said Bert. »If I back out now, another rocket jockey will take the plunge and be the hero. I can't live as the guy who wimped out.«

»At least you'll live,« said Fritz. »Is that all you're doing this for, to be the hero?«

»No,« said Burt. »I mean, that's part of it, but it's bigger than us. I'm doing this so our society will have a future. That goes beyond being a hero.«

Fritz took a minute to formulate a response.

»There are still stars. There aren't many left, but there are some. We can find a rock around a red dwarf and call it home just like the one we left a hundred years ago. Those stars burn for a long time.«

»A long time is not forever,« said Bert, pointing toward the black hole. »But in there … in there is.«

They said their goodbyes, hoping to see each other soon, and that the signal between them was private. Fritz didn't want to hear the other rocket jockeys ragging on him when he returned to the mother ship, hopefully with his pal in tow.

Bertram was right about one thing: they didn't know how long their society could hold on. The universe was getting very old, seventy-six trillion years old, the astro-philosophers estimated. Their society had not been around nearly as long, only some four thousand years, according to some (and the most orthodox celestial spiritualists said the universe itself was as old as the society, but evidence suggested that this was unlikely).

If there is a universe inside the black hole, as the astro-philosophers say, then they will have more time, infinite time. If the universe inside the black hole is like the universe outside, then yes, it too will eventually fade out and die, but there will be black holes in there too. Black holes inside black holes inside black holes, and every couple trillion years, someone can dive into the next and continue onward into forever.

Bertram was not doing this to save himself, nor to be the progenitor of the next society (he was alone, after all). This was a mission of exploration to save society.

If he saw that there was a universe inside the black hole, he would turn the ship around, fly back at super light speed, tell Fritz, and together they would relay the findings to the mother ship. Then they, the last several thousand people left of their society – Bertram, Fritz, the other rocket jockeys, the celestial spiritualists, the astro-philosophers, and the rest – would steer the mother ship itself into the black hole and the next chapter.

It was time, either the end or the beginning.

Bertram had already maneuvered the rocket twenty minutes toward the black hole, into the gravity well, beyond the point of no return. He approached the black hole halfway between the north pole and the equator. Hoping that this approach would avoid the dangerous accretion disk and the relativistic jet while Fritz watched.

»Just do it already,« he said to himself.

He could have said it to Bert, but the gravity would delay the signal, and if he got it at all, Bert would not be able to respond, so it would have been the same.

Bertram needed to hit his boosters. That much was at least known by the scientists from previous failed experiments. If Bertram augured his ship into the black hole without significant force, it would be ripped apart.

The scientists had sent two ships into the black hole already, in previous experiments, at significant costs. Finding material to build new spaceships was difficult.

The first ship was spaghettified, torn apart in thin strips by the intense gravitational pull, as the scientists looked on with their telescopes past the gravity well.

The second (with boosters) had made it into the black hole, possibly unharmed, but never returned. The onboard computers were programmed to turn around after twenty minutes, but it didn't. They never actually saw it enter. They watched it circle a few times and then disappear on the far side of the hole.

There were several theories as to why it didn't return. Obviously, it might have been destroyed, but another argument by some of the astro-philosophers and even the celestial spiritualists (they rarely agreed) suggested that perhaps a Zustril could do (on the other side of the black hole) what the computer could not ... something about free will.

Spirituality and philosophy aside, the society had few options and few extra ships to experiment with, and Bertram volunteered to be the first to fly beyond the gates of space-time.

He circled once more, and then, in eye shot of Fritz, he hit the boosters and augured the rocket into the black hole.

Fritz took a deep breath.

Then, for some reason, Bert stopped just at the edge of the event horizon. Fritz didn't know how he could. But he did.

»Bert, what are you doing?« Fritz asked himself.

»Bert, what are you doing?« he said over the com-link, ignoring or perhaps forgetting the delay, »Go in or come back. You're in a dangerous place.«

There was no reply.

»Bert! Respond!«

His spaceship grew redder and redder as Fritz looked on. Bert must have chickened out a second after it was too late and was being roasted at the edge of the horizon.

But somehow, Fritz didn't think that was the case. He saw what he saw, and he knew that it was probably just wishful thinking, but another part of him felt that Bert did make it into the black hole somehow.

Fritz waited for two hours, watching his friend's rocket get redder before returning to the mother ship, dejected, but still, somehow, he thought maybe, just maybe, Bert had made it.

... but he did not stop just outside the black hole as Fritz had seen. It only appeared that way because of the weird properties surrounding such a strange celestial body.

Bertram did cross the event horizon.

Hitting the super light speed boosters when he did caused the ship to enter the black hole unaffected by the destructive gravitational pull. He was fine, his ship was fine, and ...

As the astro-philosophers theorized ...

And the celestial spiritualists prophesied ...

And the rest and last of Zustril society hoped ...

And at least one rocket jockey proved ...

There was, in fact, a universe on the other side of the black hole.

As he looked at this new universe, tears began to stream down his face, and his vision blurred, but he barely noticed. He was in such shock that he noticed nothing about himself and only saw what was other.

Bertram wiped the tears from his eyes and set his timer for 20 minutes. He knew he would be distracted, already had been, and for how long, he didn't know. Without the timer, he might have spent a lifetime looking at what he had just found. With the timer set, he relaxed a little and marveled at this new universe.

»Fritz,« he said. »If only you came to see this with me.«

It was unlike the dim and darkening solitary galaxy that he knew, but a multitude of galaxies. Galaxies of myriad sizes and shapes, bars and spirals, collectively forming filaments, spider webbing off into infinity or nothing; from his perspective, they were the same.

This is what the historians had said: the universe was like trillions of years ago when new stars were forming every day and galaxies filled the sky.

He soaked in the view of this strange new world, a universe like the one that his ancestors first discovered when they looked up to the sky, until the timer ran out.

Bertram took another moment to absorb the universe. He could have stayed there forever and perhaps would have, with the rest of the mother ship, once he returned. This new world was theirs to take and theirs to enjoy forever and ever.

The universe looked generally the same in every direction. Bertram looked for what he thought was the edge, augured his rocket in that direction, and hit the boosters.

Faster and faster, he flew toward the edge of the universe, the inside of the event horizon, going faster than the speed of light. He closed his eyes as he was about to cross, again not knowing what would happen this time, and then …

Bertram burst through the edge of the event horizon of the black hole he had entered twenty minutes or maybe a half-hour earlier, and with him came the entirety of that universe in a great splattering of matter. Everything inside the black hole vomited into the old and dying universe.

He looked around.

Did Fritz leave? Sure, Bertram had been inside the black hole a little longer than he planned, but not that long. Did Fritz get tired after 21 minutes and bugger off?

No.

As the matter from the black hole explosion quickly disintegrated into nothing, Bertram looked around to see no stars. The old universe, or wherever he was, was utterly black and nearly completely empty.

The rocket was either traveling at several times the speed of light or standing still. In the emptiness, there was no way to tell and little difference.

After some time, impossible to measure, his ship was hit with a photon, the only thing left in this place. And on this photon was written a message that Bertram could decode with his onboard computer.

»Bertram, if you are getting this message, then I was right. I didn't think you died outside the black hole. I don't know what took you so long to return, but perhaps someday I will. We waited for three years for you, and after you didn't return, we moved on, looking for another star that may give us some more time. We are heading toward the coordinates UGPS J072227.51–054031.2. If you get this message soon, perhaps you can catch up to us. Everyone tells me you are dead, but I don't believe them, despite what I saw. Maybe we'll see each

other again. I hope we do, but if we don't, I'll never forget you. None of us will. Fritz.«

Bertram rubbed his eyes after reading the message. Just how far in the future had he traveled?

When he ran the photon through the computer's dating program, it returned a number with far more digits than he could count without losing track.

There was no way to know what direction his society had traveled, even with the coordinates. They were sextillions of years old, and with nothing left of the universe, he had nothing to go by.

Did he destroy that universe inside the black hole when he came back, or had he been caught at the event horizon in a nearly eternal paradox that took no time at all and could only leave when the black hole exploded? He didn't know. He chose to believe the latter, otherwise the guilt would have been overwhelming.

But he was still alive.

Fritz had predicted he would live on if he did not go into the black hole, but in twenty minutes, he had lived closer to forever than anyone else ever had. Perhaps his civilization had entered another black hole, and perhaps they were still alive in a different universe. But he would never know. He was causally disconnected from them.

Was there anything left? He didn't know that either, but if he found another black hole, he would find another universe.

Bertram, the last person in the universe, moved on through the nothingness.

Kareena

MASSIMO SOUMARÉ
Translated by Toshiya Kamei

Stillness.

It wasn't the sort that called for reflection. But it dug a chasm of immense solitude in the hearts of these slight creatures known as humans – whose vain conceit crumbled as they rapidly morphed into lifeless corpses – in this ailing world covered with toxic sands.

No wind stirred.

Rust gnawed metal.

Ruthless, inexorable rust.

Yet Yareah loved them both – rust and decay – partly because, for now, they hardly concerned her.

At least not yet. Not while she was alive.

Sheltered in the shade of a makeshift parasol, Yareah was lying on her back on the deck of her sister – a metaphorical nickname for the ship-truck. She gazed at the sky for the umpteenth time.

A month had passed since she had been stranded there.

In the distant sky, an alaquadra flapped its wings, circling high above to catch a few small rodents off guard. If it were flying closer, Yareah would have taken care of the pressing problem at hand, but the bastard was out of her reach.

Yareah turned on her side. She was a thirtysomething woman clad in an old, tattered cloak. She had rail-thin legs, a lean, muscular body, and lush, dark hair twisted up in the back. Had she eaten regularly in her adolescence, her figure would have grown fuller, but she might have ended up becoming a prostitute in some port. She wouldn't have been as free as she was now.

She burst out laughing.



Born 1968 in Turin, Italy, Massimo Soumaré is a translator, writer, editor, and independent researcher. His books include Viaggio nel Giappone sconosciuto (2021), Ordelaffi (2022), and Il filo sottile del mare (2022). He has contributed to magazines specializing in Eastern Asian cultures such as Quaderni Asiatici and A Oriente!. He has translated works of numerous Japanese writers, including Osamu Dazai, Kenji Miyazawa, and Yasumi Tsuhara. For more information, visit www.massimosoumare.it.

Free?

She stared at the small musical cylinder she held in her right hand. It was the last one she had received before supplies ran out several days ago.

Of course, she was free to die in the sand.

Was her sister asleep? Or maybe she was starting to die?

Yareah's stomach growled, breaking the silence.

It was hard to deceive hunger. Even if she quelled her mind, her innards were far more honest.

Yes, maybe her sister, too, had an empty stomach.

With the little cylinder in her hand, she struck hard against the dark plate.

»Hey, Kareena, are you there?«

No answer came.

Yareah grunted.

Of the three possibilities she had considered, she liked the last one the least. Had the *Kareena* come to despair? If so, she still had the option of devouring Yareah. Of course Yareah had no intention of making it easy for her sister. During the years they spent together, Yareah had discovered some weaknesses in the Kareena, but she knew full well who was the stronger of the two. Moreover, Yareah's flesh and bones would help the Kareena activate her mechanisms and produce eggs to repair herself even after a long time – advantages of the inorganic over the organic. Yareah, on the other hand, couldn't feed on metal. This irritated her a little. She had always wondered if devouring iron would give her the same sensation when she sank her teeth into soft, bloody flesh and felt it go down her throat and settle in her stomach.

She grinned at the memory of chewing on a bolt as a child. The only things she had got out of it were a chipped tooth and a resounding slap from her mother. Then, for the first time, she realized the woman possessed considerable strength, despite her bony frame.

Yareah calmly stood up. It was no use hurrying. She didn't want to waste her energy. Approaching the balustrade at the edge of the ship, she looked down through the goggle lenses that protected her from both the sun and the sand.

Most of the many wheels were slashed.

The wheels had become damaged without their noticing, only to give out later at the least opportune moment. Yareah had been imprudent. Success had gone to their heads, making them neglect the most basic checks.

The three pnemoarcs – a fairly recent model, although not the latest – were intact, but she certainly had no desire to use them to get out of this jam.

She knew full well what the pnemoarcs were and how they worked. In short, they were disloyal captives. The *Kareena* had seized them from the ships she had captured. Her sister was often merciless and had made them understand by force that they owed her absolute obedience.

As humans tortured other humans and deprived them of their freedom little by little, the *Kareena* had done so with the pneumoarcs. It had been a lengthy process. For two months, what seemed like atrocious moans had echoed through the vessel, uninterrupted.

Yareah had covered her ears with her hands, but it made no difference.

At first, she had nightmares, but she got used to those, too.

You got used to everything.

Even to screaming gears and pistons.

Yareah wasn't sure if that was true. Still, she attempted to make sense out of a hellscape where reason was merely a crazed sliver in a sea of madness.

Yet her nightmares had a positive effect. She often imagined her sister screaming like that. That thought drove her over into seemingly eternal ecstasies.

At any rate, the *Kareena* would never let go of her tamed slaves now. If her sister had allowed her to release a pneumoarc, Yareah would be at the mercy of its vengeful instincts. Some believed machines had no feelings, but she knew better. They were quite capable of hate.

The pneumoarcs might head for a port Yareah knew nothing about.

The same was true of the *Kareena*. Once a pneumorac broke free, she would no longer have any control over it. Once it

returned to its place of origin, the pnuemorac could betray the *Kareena* by revealing her whereabouts and making her traceable. Given the mistreatment it had endured, its betrayal was quite a possibility.

The *Kareena* had captured them only because she needed them to increase her power.

In short, Yareah and the *Kareena* had no place they could call home, nor anyone to take care of them. They only had one another.

In a sense, they represented nuisances in Mondo-9. A waste to be purged as soon as possible.

Yareah turned with a sigh, then headed for a door. The dark metal was streaked with rust here and there.

These particular marks made the Kareena distinguishable from other ships.

Reinforced on each side by large panel armor, her 7,000-ton displacement hull, about one hundred and fifty meters long and eighteen meters wide, was entirely painted in a lugubrious black, with streaks of rust. From a distance, those streaks looked like running blood or, worse, throbbing wounds etched deep into her steel flesh. They resembled, in a way, the subtle scars furrowing Yareah's face. She'd otherwise have been attractive with full lips, a strong nose, and slightly elongated eyes with emerald-green irises.

Many knew the ship.

They had good reasons to fear her.

The door opened with unexpected ease.

The contrast between the exterior, lit by a blinding sun, and the gloomy interior was striking, but the young woman stepped inside without hesitation.

She shivered.

Not out of fear, but because of the temperature drop.

The lights on the ceiling were kept dim, but they allowed her to move forward without a hitch.

She shut the door behind her.

With a sure step, she headed for the dashboard. She moved away from the right wall, greased with lubricating oil, which gave off a pungent odor, and walked close to the opposite wall.

A gooey substance dripped from somewhere in the ceiling, causing soft noises as it landed on the floor. All the metallic sounds, however, had ceased, not to mention the vibrations from the two powerful boilers, one of the elements that made the Kareena so fearful. Dozens of corridors crisscrossed down there. A greenish light flickered at the end.

Her destination.

The gangplank was too large for one person. The ship had been assembled to house a crew of twenty, but she'd been modified to be piloted by a single individual. Many pipes were detached from the walls and connected to a control chair in the middle of the room.

Calling it an »armchair« was a bit of a stretch.

The brown leather parts were padded, though frayed and stained black. It hadn't originally been a standard feature. The chair came with armrests that allowed you to rest your forearms and use many levers even when your limbs were in the rest position. At the front, various indicators flickered, and at the bottom, numerous pedals gleamed on the linoleum floor. It reminded Yareah of a pipe organ she'd seen long ago in an old picture book.

Despite all those controls, the operator could sit quite comfortably. She and the Kareena had built that command post together, little by little. Perfecting it clash after clash, until the optimal result was achieved.

Yareah went to the three semi-oblique windows that allowed her a 180-degree view. They were made of a thin elastic membrane called »vetrogel.«

Extending her arm, she put her palm on one and then pushed hard. The membrane folded. Several times she withdrew her hand and then pushed again. As often as she repeated that game, she always found it funny. She was amazed at the tricks of light created by the sun's rays on the surfaces when they curved. Still, not even the membrane had managed to trap some prey to feed on. Useless glass!

Suddenly, she tried to punch it, but it had no effect, except for the backlash against her arm.

The panorama outside didn't differ from the one on the bridge.

Sand.

Sand spread in every direction.

And two alaquadras.

Two of them?

No, more than that. She ran inside and grabbed her binoculars to get a better look. Now a whole flock was circling above. They seemed rather agitated.

Then a cylinder sprouted out of the wall: *Sister, calm down.* A deep, female voice reached her ears. It was, in a certain way, sensual. It was the *Kareena*.

A bitter, unpleasant taste filled her mouth. It reminded her of stale water. She stuck her tongue out in disgust. In fact, the taste was worse. Yet it was her own saliva.

Buried in the armchair, her legs crossed, Yareah had her booted feet up on the control panel in front of her. She pressed her feet against the panel rhythmically, making the metal parts anchoring the armchair to the dashboard creak.

»Do something about this noise!« Yareah yelled. »It's getting on my nerves!«

A small cylinder fell out of a large metal box near the armchair. That was the *Kareena's* way of communicating with her: *No big deal. Anyhow, I know very well it doesn't bother you.*

Yareah laughed, baring her sharp canine teeth.

»Sure thing ...«

Considering all the noises her sister made under normal conditions, this was very little. But in the silence now reigning in the vessel, it seemed to subvert the newly established order.

»Joking aside, do you think it's a freighter or a warship?«

Another cylinder fell out.

Hard to tell from a distance.

To alarm the whole flock, something huge must have disturbed their nests. The most plausible answer was a ship. The birds, for some time, drew large circles across the sky, flying closer and closer to the Kareena. In all likelihood, they were leading the intruder away from their territory. This meant that the ship had taken a direct route toward the two sisters.

Of course, one could only hope. Assuming this was the case, the intruder could change his route at any time.

In that case, it would be a bitter mockery to delude them, to let them believe they could manage to escape from their situation, and then at the last moment to leave them in trouble.

Yareah gritted her teeth until her jaw hurt. Her sister suddenly let out a hiss that spread throughout the vessel. On that point, they thought the same way. Neither of them liked to rely on chance, which made them furious. Had it been possible, they'd have literally snapped off fate's neck and fed on its heart.

Still, they were helpless. All they could do was wait.

Launching a distress rocket?

Such an action would have had exactly the opposite effect. Any other vessel would have changed her course to dodge potential trouble. When two unknown ships approached each other, it always posed a risk for those on board. The giants of steel, steam, and rubber could have decided to duke it out. In that case, all the hapless crew members could have done was pray for their survival. Or at least a quick death.

Another cylinder came down.

It was a bit oily. Not a good sign. The *Kareena* too was at her wits' end.

»I wish we'd got some sand rats left,« Yareah sighed.

Her stomach rumbled again. She hadn't eaten anything for three days. Her gaze landed on where the floor met the wall, but there lay only a shadow. Yareah had eaten away all the vermin that had infested the ship. The thought of the stinking flesh of those disgusting rodents made her mouth water. Things were dire.

Her sister's voice broke her reverie, bringing Yareah back to the urgent reality.

You'd better get dressed.

Yareah was naked under her worn-out cloak. It was scorching hot on the deck, and sweating more than necessary wasn't a good idea. She needed to conserve precious bodily fluids. So she had only bothered to protect herself with that cloak. Back on the bridge, where the temperature was much lower, she wore the thick blanket she kept there for cold nights over it.

She took her feet off the control panel, got up, and walked to one of the side walls. As she banged her fist against it, a

hidden compartment popped open, revealing a large cabinet. She put back her blanket and picked up a jumpsuit as dark as the Kareena. At first glance, the suit seemed to be made up of large straps fused together. Bizarre as it seemed, it was far more efficient and comfortable than the clothes normally worn by crew members. Furthermore, it had been treated with the chemicals of the Poisoners, which assured protection even against the plague.

A fragment of memory flashed through her mind.

A male face. She didn't find him unpleasant at all.

Then his face twisted in pain. His eyes turned upside down, his cheek marred by an old scar, his mouth wide open letting out a heartrending scream. He should have made her wishes a reality. She was even kind to him. Very kind. In fact, that didn't require any effort on her part. It was on the contrary. But her kindness failed to convince the Poisoner she had taken prisoners to satisfy her demands. So she decided to resort to more convincing, conclusive means.

She didn't find that unpleasant either.

In the end, he had satisfied her. He even begged her to let him please her.

She almost felt bad about killing him after she was done with him.

As far as she knew, no other jumpsuit like it existed anywhere else. She and her sister had conceived the principle behind the suit's function.

She took off her boots and wiggled into the suit. It clung to her bare skin like a fiery lover, reminding her of the deceased Poisoner's rough embrace. Then she put her boots back on.

The whole operation took her little time. Experience had taught her how to slip into the suit in a matter of minutes.

Behind the vetrogel, an ever-increasing cloud of sand and steam rose in the sky. She couldn't hold back a shiver of joy. It was heading straight toward them! Luck was often on the side of those who waited for the most favorable moment.

»Come on, bitch. Don't keep us waiting too long!«

The fact that the *Kareena* was stuck in a deep pit played to their advantage. She was barely visible from a distance – just a

black dot on the horizon that could easily be mistaken for a rock formation.

As they agreed, Yareah headed for the stern battery, the one now in the highest position. The ship would fire sharpened iron and bolts later.

When she reached the turret, she fumbled with various levers.

She cursed.

The levers were stiff with rust and difficult to move, so she had to use a lot of force. The gears finally shifted with a shudder and a screech, replacing the contents of the three cannon's breeches; instead of throwing razor-sharp metal pieces, which would have torn the enemies' bodies and perforated the hull, she engaged the mechanisms that would trigger three large harpoons. Then, using a large crank, she slowly rotated the cannons toward the cloud of dust.

Yareah had to do these things manually. In truth, the Kareena could have turned the turret on her own, but she didn't want to turn on the boilers ahead of time.

She ran her tongue over her chapped lips. She was thirsty, but the water supply had run out the day before. She quenched her thirst by thinking that she would soon have plenty of water.

She fixed her gaze on the horizon. The artillery wasn't equipped with a telescopic sight but only a simple viewfinder. She observed the position of the target with her binoculars.

After a while, the outline of the ship appeared.

It wasn't a war ship, but a large-scale commercial vessel, 280 meters long with 18,000 tons displacement. White steam rose from the four chimneys. Its boilers were designed to generate considerable power.

Normally it would have been fairly easy prey. In their current situation, however, the margin for error was nonexistent.

The unwary vessel was close enough for Yareah to see the crew move calmly on the bridge.

It got closer.

She couldn't make out the name on the sides because the ship was advancing with the bow directly toward them. Sud-

denly, the crew stirred with agitation, panicking when they recognized the *Kareena*. That turmoil turned into real terror the instant they realized what they were dealing with.

Her mouth twisted into a cruel grin. At times, being »famous« came in handy. She and the *Kareena* had become protagonists of gloomy ballads in many ports.

The Kareena and Yareah took no prisoners.

A carrion ship and an assassin, a failed hooker.

The freighter tried to deviate from the course it had taken, but it was too late. The bow began to veer just then. The only result was exposing its side.

Big mistake.

Had the ship continued to advance as before, it would have offered less mass as a target. Moreover, the ship would have swooped down on the Kareena, which, stuck and exhausted, would have literally split in two. The cargo ship would have suffered damage, but nothing irreparable.

The merchant ship's name became legible.

The *Namuna*.

Written in dark letters, partially faded.

500 meters.

Finally it came within range.

Yareah didn't miss her chance. She took aim.

The three stern cannons launched the harpoons with a roar. Their ends had sturdy, thick steel cables. The large winches on which they were grafted, one for each cable, swirled, hissing like ominous sirens. A few seconds later, they landed on the target. One centered the stern chimney of the *Namuna*, while the other two shattered the central part of the side, penetrating deeply. Yareah then moved a large lever to reverse the rotation of the winches connected to the engine room. These came to a sudden halt, and then rotated in the opposite direction.

The *Kareena's* boilers turned on suddenly.

The backlash startled the entire hull. Yareah was ready, so she grabbed a clenched support bar. Then, with difficulty, she maneuvered away from the artillery to go back inside and reach the helm station.

It was no easy undertaking. As the steel cables rewound, the Kareena continued to pitch as if in the midst of a sandstorm. At the same time, the panicked Namuna tried to escape by continuing to tack. The friction produced by the effort caused yellowish smoke to rise from the tires, but the merchant ship ended up helping the Kareena move, in spite of her ripped wheels. In a flash, the black ship climbed out of the deep pit, ready to pounce on her opponent.

The two sisters' plan was to use the enemy's own strength to attack it. The Kareena had maintained an energy reserve for such an attack – a single, powerful attack.

Yareah finally reached the bridge, slashed decisively toward the control chair, and then tinkered with the various levers while keeping the instruments under control.

»Now leave it to me!« she yelled at her sister.

A small cylinder came down: *Move! I haven't got much energy left.* The tone of her voice was musical as usual but devoid of any emotion.

Yareah grimaced. She hardly needed to be reminded. She couldn't stand being rushed, but she liked it when her sister had to depend on her. »Rather, have you already rotated the turrets toward that bastard?« she scolded her.

They would unleash hell from there.

Again the metallic sound of the cylinder entered its housing: *The cannons are ready.*

She gritted her teeth. Since they had hooked it using only the stern, piloting the ship in these conditions was complex. She had to pay close attention to keep parallel with the enemy vessel so that, once in contact, they could use the remaining cannons in the most effective way.

Everything vibrated, as if the *Kareena* was about to fall apart.

The crash was terrible.

The two monster ships clashed against each other, twisting their plates.

The enemy ship was larger and heavier, but the *Kareena* was built to withstand confrontations with more impressive opponents. The steel cables benefited her by functioning like an

elastic sling for a steel ball.

Some crew members rushed from the railing, letting out desperate cries.

Yareah pulled a lever on her left, then immediately another, raising the cannons' firing angle.

With the Kareena lower, blows would penetrate in an oblique direction piercing the hull and devastating, at the exit, the enemy open deck.

Yareah moistened her lips and slammed her palm against buttons on the console.

Sparks and sharp metal splinters poured from the turrets.

Blazing flames engulfed a large part of the *Namuna's* bridge. Here and there the ship's plates became stained vermillion. They were reminiscent of the rusty streaks on the *Kareena's*.

This similarity was no coincidence.

Moans and wails arose from everywhere. The dying crawled across the deck, leaving a dark red trail behind them. Blood spurted from severed limbs like geysers. Those who were still able to walk scrambled to put out fires or attend their injured comrades.

Some, covered in flames, chose to put an end to their excruciating pain by plunging into the void.

Yareah moved the levers to the left again. The turrets rotated a few degrees to the right.

She banged the buttons again. The *Kareena's* guns blasted again.

Bits and pieces of the *Namuna's* plates rained down over them.

»Now it's all yours!« Yareah cried.

A mixture of a metallic clang and a mad scream of joy broke out from her sister. By now, Yareah had done her part. Taking possession of the merchant ship was the *Kareena's* job.

Metal crashed against metal. A cold shiver ran through Yareah's spine, but she didn't find it unpleasant at all. It meant her life had been spared for now.

She savored it, sipping the sensation like a precious liqueur.

The day was drawing to a close, the clouds tinting a deep dark red.

A gentle, fresh breeze had started blowing, as if to taunt Yareah who had been panting in the heat, emphasizing once more what true freedom was in Mondo 9.

The ability to be wickedly mocking.

The natural landscape around her was marred by small shards of metal and nearly intact corpses that were quickly covered with sand.

Ultimately, the *Namuna*, although damaged, had managed to escape.

To be more precise, two-thirds of it had escaped. The rest remained on the battlefield.

An indisputable prize for the winner.

Despite the fact that her two boilers were operating at full capacity, the Kareena stayed put, devouring the war trophy with her nails and teeth. The collected shards crunched inside her internal bulkheads, becoming fused together in strange geometries that strengthened the ship according to her peculiar logic. The fuel she had snatched from the opponent flowed into her large tanks.

Yareah had to hurry. The *Kareena* could decide to leave at any moment without notice. She knew how to be difficult when she wanted to. Even so, she was giving Yareah enough time to get supplies.

»Thank you, sister, for your generosity,« she whispered through clenched teeth.

Through a winch, she lowered, for the fifth time, cables with various pointed hooks at the ends. They were fixed to a rod that was movable along the hull for about thirty meters horizontally, positioned a little higher than Yareah's height. The hooks were designed to collect materials left on the ground.

She raked the ground for a few minutes with the hooks before pulling them up.

The cables reeled in, screeching. It seemed to take forever.

Impatience and curiosity burned in her chest.

What »gifts« would she receive?

She was unable to choose what to collect from the ground, but it was better than going down and wandering through the poisonous sands. That prospect held zero appeal.

She leaned out of the balustrade to look down.

Several sacks, some bags, two almost intact bodies, two half-charred ones, and a twisted one reduced to black mass.

Then something stirred.

Yareah frowned.

As the object approached, she could make out its shape more clearly.

It was a girl.

She was about thirteen. The jumpsuit she wore told Yareah that she was an apprentice. Maybe she was on her first ship. Her sullied red bandana barely hid a mass of unruly golden curls, albeit scorched. The hooks had penetrated various points on her left side, red stains seeping through her clothing.

She dangled before Yareah's face.

They came face to face.

The girl's hazel eyes opened with difficulty, staring at Yareah in amazement. Her eyes clouded with pain but shone with keen intelligence. Her cheeks were bruised and soot-stained, her mouth partly swollen.

The girl let out a groan.

She had no strength left to speak.

Her eyes, however, held a desperate plea for help. She longed to live.

Yareah looked back at her. Her lips curled into a maternal sneer, prompting the girl to respond in kind.

It happened in that instant.

Yareah's right arm, holding a heavy steel bar, descended on the girl's head, and shattered her skull. Blood and brains splattered everywhere.

The light in the girl's eyes faded as if it had never existed.

»How annoying! Hurry up and die!« Yareah complained.

It was the third time she had picked up someone still alive.

Yareah, without too much concern, tore the girl's body from the hooks and dragged her towards a small pile of corpses, leaving a trail of blood on the deck. She would later search

them and take whatever she needed. Next to it was another pile of bags, bottles containing precious water, and much more.

She hurriedly detached the other corpses and objects from the hooks and placed them on the piles. She threw down the charred body. She had no use for such a thing.

There was no time to waste. She had to hoist as much as possible before her sister decided to move.

The cold, miserable night had fallen on the stretch of sand. The three moons rose high in the sky, illuminating the dunes.

The *Kareena* had replaced or repaired her damaged wheels and was now moving slowly away from the place where she was trapped. Since she kept a straight course, Yareah didn't need to navigate. Although she hadn't finished all the repairs, she couldn't risk being found by some enemy. Staying on the move was the safest way to survive.

She was destined to wander the deserts for eternity.

A faint, lone light shone on the deck.

Yareah sat cross-legged beside a burning brazier. Her back curved, she had untied her hair. In front of her, she had lined up personal artifacts she had stolen from the corpses. She kept what could be useful or intrigued her. She had tossed away the rest.

Hunger pangs stirred afresh in her gut.

Unfortunately, the sacks and bags contained no food.

However, if everything went as planned, the smell of the corpses would attract alaquadras the following day. If she shot down two or three larger ones, she would have enough to eat for a while.

If she failed, she would have to resort to something else.

She glanced absently at the pile of corpses. Her gaze fell on the girl's inert arm, which was partially lit by the pale flame of the brazier. It had begun to turn dark, but it still didn't look unpleasant. The girl didn't seem to have suffered from hunger.

If the damned birds didn't show up, she would have to feed on the corpses before they started to rot.

It wouldn't be the first time she devoured human flesh.

Poisoning didn't worry her. They had been on the toxic sand only for a short time. Besides, she had the Poisoners' medicines to repel any danger.

The chilly wind blew harder, swaying her mane.

Metallic bangs echoed under her feet several times. It was her sister reminding her that it was time to go back under the deck. She had to get some rest so that she would be in good shape at dawn.

Yareah spat on the deck.

»Yeah, I've got it. Shut up!«

She rose, picked up her spoils, and headed toward the interior of the ship while humming an old lullaby her mother had sung to her years ago. Her song merged with the rhythmic hum of her sister's wheels and pistons, creating a strange sonic illusion that rolled out like a macabre laugh that would make anyone's skin crawl.

The mirth promised misfortunes and sorrows.

Rust and rot.

Waiting It Out

MATTHEW SPENCE

»We should wait.« She looked uncertainly at the modular sections of the Outer Wall. »I don't think we were meant to go this far. We should wait until the rest of the repair team gets here, at least.«

»They're at least half a length behind us,« her partner's voice said in her ear. »Besides, this is a historic moment. We're the first people in our generation to see this part of the Ark. Just stay where you are and maneuver around the breach. Can you actually see it?«

»Yes,« she finally replied. »It's…just beyond the seals. I…I can see darkness, some reflective flashes, and the atmospheric venting, like little jets of steam or fissure eruptions.«

»Wow. That's open space, all right. OK, I'm coming up. Look behind you, you should see me…«

Anna Eve did so, switching her helmet view to show Adam River climbing the side of the »cliff« behind her. The cliff was an illusion created by the shape of the Ark, which was too big for them or anyone else to see all the way around, but it looked like he was walking sideways along the crust of the Ark's inner habitat.

Adam joined her at the edge of the bridge. For a moment they both simply stared at the darkness beyond.

»This is it,« Adam whispered. »The Outside. Ha! I wish our Minister could see this. No angels or ET's, just…the sky. Like our ancestors used to see it.«

»Except that they could breath it when they did,« Anna replied. »If we went through without our suits…«

»Decompression. Yeah, I know. But just imagine -- the hull is all that keeps us safe from it. Okay, let's take our measurements for the team. I'll save a copy for us, for posterity.«

Anna had to inwardly smile at that. Adam had his faults but his enthusiasm for the unknown was infectious. Neither one of them had ever been this far up the side of the Habitat, where the curve of the ground met the curve of the »sky« and the upper half of the Ark.

Like their parents and parents' parents, they'd been born on the Ark and would most likely die on it before the Ark reached its final destination, the Target that the Ministers practically worshipped as humanity's new Eden, which was still hundreds of light years and decades of travel away. They'd become fixated on it, while the scientists simply took their measurements and waited, and the engineering teams took care of the Ark, as generations before them had.

Anna and Adam maneuvered out of the way as the rest of the team finally arrived with sealant and sheets to repair the breach. Like them, they took a moment to look at the Outside before getting to work; also like them they'd never actually seen the Outside except in vids and slides.

The Ark had no windows. It was a cylinder, several dozen kilometers long and wide, with a center where gravitational spin stopped and weightlessness took over. On the »surface« above and below, generations of people had been born, lived, and died knowing Earth only from old histories or legends, depending on which section they lived in. Over over the course of time those sections had become divided by culture and what resources they'd had passed down to them from their ancestors. The lower half, where Adam was from, was the more advanced, having saved their ancestors' knowledge through the scientists and the Ministers that both halves had. Anna was from the other half, where life had been simpler, harder, and more focused on survival than knowledge, but the the two halves had enough contact with each other that she could get an education »down below.« That was where she'd met Adam, and where she'd decided to stay and become part of a repair team with him. Aside from the promise of a steady job, she

took their working together as a sign that there might be greater contact between the two halves aside from the occasional trade and »border« conflicts that took place.

»Quite an experience,« the team leader, an experienced engineer, said when they were done. »The seals will hold until they can finish healing the outer hulls. Then we'll repair the surface crust. Even if it ruptures again, it won't affect the rest of the Ark's interior. In fact, the exterior is so pitted and blasted from particle debris, from the vids I've seen, that one more crack or two on the outer hull really won't matter that much.«

They lowered themselves in their transport dirigible back down to their side of the Ark, where the familiar farm plots and sectional homes waited. With their shift over, Anna and Adam went to their favorite eatery, which had a mixture of Old Earth and mixed Ark Asian and Euro food, for dinner before heading back to their respective habitat apartments.

Once home, Anna reflected on what they'd seen. Her place was somewhat smaller than Adam's, with mementos and reminders of both the upper and lower halves that made up parts of the whole. She'd lived two lives, she thought, but maybe today had been the beginning of a third…the start of having seen something greater than the inside of the Ark, a hint of what lay beyond, a reminder of where they were eventually going. She wouldn't see it, but maybe her children would; her and Adam's, she thought with some hope.

They would be the children who would no longer have to wait it out, on their way home.

The Interstellar Zoo Phenomenon

CHARLES VAN WETTUM



Charles van Wettum (born in 1957) studied both astronomy and cconomics. He spent his entire career in secondary and higher education. Only in 2022 did he switch from writing project plans to writing science fiction stories (and since then he daily spends time wondering about the differences). He prefers to write with respect for the laws of nature, and is particularly interested in the consequences of technological

'Director Bonte, your appointment has just arrived. May I send her through?'

Due to his twenty-year anniversary as director of Bonte's Dutch Interstellar Zoo, Jaap Bonte has been elaborately celebrated. It feels good to be recognized. He was especially tickled by the interview to the Galaxy Zoo Review, which has allowed him to extensively display his ambitions for both the zoo and for himself.

'Is it someone from Trantor? From the Garden of Everything?'

The reactions from his colleagues in the Milky Way Arm have been mixed. Some sycophants trying to get into his graces have given him compliments. The few who haven't responded have apparently been unable to keep their jealousy in check. The competition is steep, envy dominates and exceptional achievements like his own are looked upon with begrudging eyes – for beings that actually have eyes. Survival of the fittest is true for all species, including for zoos and their directors.

Bonte isn't surprised that Chairman Bzzoh of the Zoo Directors Club hasn't responded to the interview. Obviously, the Sirian knows that Bonte is out for his job – it is a disgrace that such an important position is held by a swarm intelligence. Bonte has already made several new contacts in preparation for the takeover of power; his appointment is a matter of time.

'That's her. The woman whose personal information you received.'

'Very well, let her in.'

He leans back contentedly. As the highest token of recognition, he is about to be visited by a representative of the Garden of Everything on Trantor. This illustrious official has made a long journey from the Center just to meet him. It's an honor; a unique event that must have a unique cause.

For years, there have been whispers about the ultimate exhibition on Trantor, more complete and grander than ever. That this representative should come here, right after his beautiful interview, could not possibly be a coincidence. They must be impressed by his ambitions, his decisiveness, and his creativity. An offer from the Garden of Everything would mean that he has finally surpassed the Arm, that his fame has reached the Center.

It would be justified. If he's entirely honest, Bonte has to admit that he's the most successful zoo director in the history of the Milky Way. And fortunately, honest is what he is most of the time. It's the Dutch way.

It is clear at first glance that the visitor is indeed a representative from Trantor. Trantorians resemble supermodels, except that they are blue and over two meters tall. This specimen's jet-black hair falls across her back like a waterfall, across a skin that shines like a cool summer's day. Bonte would love to put a specimen of her species in an exhibit in his zoo. He loves supermodels, and he knows many zoo visitors feel the same. Sadly, he hasn't been able to find a Trantorian willing to sign an exhibiting contract.

'Ah, Director Bonte,' the Trantorian echoes as she walks toward his desk. 'It's a privilege to meet your spirit.' Trantorians don't have eyes. Instead, they use a combination of echolocation and telepathic perception. During holo-communications, Bonte noticed that their face gets an erotically charged expression due to the lack of eyes. Now that he sees a live specimen for the first time, this effect is even stronger.

Bonte takes off his tie. It will help him breathe, and his guest won't be able to see him, anyway. 'Madam-female Dooo,

developments for being human. In his native language, Dutch, he has published about thirty short stories on websites, in magazines, and in anthologies. In 2023 he self-published a novel and two collections of his own short stories. In 2024 one of his stories was published in Spanish.

it's so good to see you.' Her gender-address is something he found in her file, and with important conversational partners it is vital to get the details right. When his visitor turns her head to follow him in his walk through his office, her long black tresses flow around. Bonte can only avoid staring at the exposed blue breasts with pronounced effort. Or rather: he can't.

'No flirting, Mister Bonte. I'll cut to the chase right away,' Dooo echoes. Speaking costs her visible effort, probably because of the strain of bringing the frequency of her forehead membrane within the acoustic reach of humans. 'The Garden of Everything will be launching a grand event with a completely new concept.'

Ah, Bonte thinks to himself. So that *is* why she is here. Finally, he will be acknowledged in the Center!

'It will be the first overview exhibit of all the interesting species in the Milky Way. An entire planet will be set up for it. We will collect more than sixty million species and receive visitors from the entire galaxy. Mister Bonte, we will rewrite zoo history.'

Bonte nods with understanding. This will be the biggest opportunity of his career!

'On behalf of the Central Board of the Garden of Everything, I would like to request that you, Mister Bonte…'

Here it comes!

'… come to Trantor, to help us make this exhibit a reality.'

This is it! Shivers of satisfaction run down Bonte's spine. He's going to the Center, he's going to put together a top exhibit for the biggest and best zoo in the entire Milky Way. An event that will go down in the history books. His name on the poster! »Producer Jaap Bonte«. Perhaps even »Director Jaap Bonte«.

When Madam-female Dooo puts the contract on the table, Bonte doesn't have to think it through for very long. He scans the contents. A project period of five years. Wonderful pay. Housing and complete care within an Earthly atmosphere, and at an Earthly top level. A top position. Independent advisor to the Board in all areas. Member of the Quality Team (ah, that is

a strategically important position, so he thinks to himself – if he hadn't received it, he would have asked for it). Chance of promotion to board member? It's not an explicit promise, but Bonte knows one has to create his own opportunities.

He sees that the contract doesn't contain any fine print. This is great for his resume! Afterwards ... Bonte can already imagine his appointment as chairman of the Zoo Director's Club – no, honorary chairman, of course. He will have to adjust his level of ambition. They won't be able to ignore him in the Arm any longer. The Sirian will crawl for him! Well, of course that's physically impossible, but the idea makes him smile.

'Thank you for your enthusiastic cooperation, Mister Bonte. We are over the moon with your participation,' her voice echoes through the room. Madam-female Dooo carefully stands up, leaning far forward so as to not bump her head against the chandelier. The view takes Bonte's breath away.

Housing on the zoo planet is a bit disappointing.

Jaap Bonte hadn't realized that there wouldn't be an earthly atmosphere everywhere on the planet surface. Now, his range of movement is limited to the building that has been set up for him. Not that he would complain. He's living in a grand palace with every conceivable form of luxury, the service provided by the organization is perfect, the meals are better than what he was used to in Earth's top restaurants, and the wine is exquisite. A weekly service visit from a very knowledgeable Madam-female is part of the pampering package. The service is in line with the top performance he delivers to the organization.

'It's not unexpected that I'm rising above the other team members at Quality. Dutch zoos are known to be outstanding and mine is superb.' Bonte has turned to discussing everything with the Chan3, the small four-legged servants who stand at the ready for him all day. 'That high-g-dwarf chairman is devoid of any creativity. I had to go over his head with a whole series of direct advice, the incompetent fool was simply asking for it. And you know...'

The Chan3 doesn't respond. The headless creature calmly continues vacuuming.

'... The Board has adopted many of these recommendations. They're happy with me!'

Though he doesn't play a formal role in the marketing department, he has also given his advice in that area. 'My best proposal was to organize elections, concerning the animals that will be on display,' he tells the Chan3 who is making the large bed.

'I told them: let the visitors determine the categories themselves first, and then let them vote on the animals. It will increase the engagement of our patrons. It's very simple. I've simply precalculated the increase of attention time per animal.'

Bonte still smiled at the thought. 'You should have seen the faces at Quality when the message came in that the Board had adopted my advice. They were bending over like folding knives. It's clear that I understand zoos better than all those charlatans who are in charge around here.'

The Chan3 leaves for the kitchen to program the evening meal. 'Add on a bottle of wine. The sweet white one.' He's already eating vegetarian. Chan3 sometimes has a tendency to make it all a bit too over-the-top healthy.

Despite his clear success, Bonte isn't entirely convinced that his phenomenal contributions are being appreciated enough. 'I have to stay active,' he tells the Chan3, who has returned to set the table. 'They have to see me, constantly, or my way up will evaporate.'

The soup is brought in. Bonte picks the most southern chair at the long table. The place hasn't been set, but the Chan3 will fix that.

'My last piece of advice was to show the visitors to the exhibited creatures,' he tells the Chan3, as it moves the cutlery. 'Their idiotic marketing team wanted to discuss it internally first. Such nonsense, as the advantages are simply obvious: interaction with the public leads to activity among the animals and therefore, to improving the visitor experience.'

Such mutual observation is typical in his own Dutch zoo, Bonte considers, as a Chan3 brings in the soup. Bonte has always been ahead of his time.

'I thought a discussion was unnecessary and they were holding up progress. I had no choice but to send the advice directly to the Board,' Bonte continues, undisturbed by the staff's work. 'This morning it was on the agenda. I'm sure they'll adopt the recommendation.'

The inevitability of his next success makes him gloat. The Chan3 takes away the half-empty bowl of soup. Bonte isn't fond of thin vegetable broth.

'My status with the Central Board has risen again, there's no doubt about it.' He's a phenomenon and Bonte knows it. 'I'm curious to see when they will adjust my position to my performance. It should be soon – it would be a pity if I have to file a recommendation for it myself.' He chuckles at the Chan3, who is arriving with the main course. 'I would prefer to make my career in modesty.'

Suddenly the air trembles. This is odd, as no visitors have been announced. Next to the large dinner table, the shape of the grand chairman slowly becomes visible. The Trantorian Sir-female Taaa has only visited him twice before.

'This is important,' it occurs to him immediately. 'The party ultimately responsible for this planet, spending his precious time on me …' Immediately Bonte stands up, clears his throat and heightens his senses. He must seize this opportunity.

'Bonte. This is only a brief visit.'

Bonte bends like a straw. 'Grand Chairman. Such honor.' He doesn't know much about Trantorian genders, though the chairman looks like a twin sister to the Trantorian visitor he received on Earth. Perhaps the skin was a fraction of a hue more green. He'd have to see them next to each other to make a good comparison.

The chairman stands up straight. The view is breathtaking.

'Enough flirting,' the chairman echoes. 'Your advice has been adopted. There were some moral objections, initially, but because this was your recommendation, the discussion was quickly settled.'

Bonte bows slightly to receive the compliment. Fortunately, his creativity and decisiveness are being appreciated.

'This will obviously have consequences for your own position.' The chairman lets the echo fan out. 'My opponent wants me to check to see if you sufficiently understand this.'

Bonte smiles. The chairman has found a diplomatic way of addressing his promotion. Perhaps he will be directly admitted to the Central Board. Within six months of starting his work – this would be a great achievement!

'I'm aware of my own position, Sir-female Chairman,' he says affably. 'And I will continue my efforts to make this exhibit into a great historic success.' Once he is on the Central Board, Bonte considers under his smile, this chairman is someone he can handle. Everything is going according to plan.

Again, the chairman bows, Bonte suspects in recognition of the future advancement of his station. Perhaps even now, to maneuver himself into position, he suddenly realizes. Should the situation occur that the new board member gains more say in the organization. Power politics work the same everywhere. The visual effect of the bow strikes Bonte speechless, and despite his best efforts, he is unable to avert his gaze. Then the chairman's image trembles, fades, and the Trantorian dissolves into nothingness.

'Attention. This is a service announcement,' a voice sounds through the room, as Chan3 enters the room, with a steaming eggplant dish. Bonte looks around, surprised, as he hasn't experienced this before. 'Adjustment sub article 23.22 will be operational in under one minute.' Strange, Bonte thinks. This communication might be wrongly addressed. Once he's on the Central Board, he'll have the communication plan thoroughly inspected.

'Take the wine to the salon.' Bonte leaves the dining room. His appetite has disappeared as he has to process his success. The moment he walks into the hallway, he sees the front of the palace trembling. It's as if hot air is rising. The wall dissolves, the stone fades, and even the two large paintings dissipate. Now he can almost see through the wall. A moment later, the facade is gone.

Instead of the outer wall, Bonte sees a yellow plain – it looks like a square. The sky above it is dark green with a few dirty-brown clouds. In the square, just outside of the palace, there are a few groups of creatures. Dozens of Trantorians, and groups of members of other species a bit further away. Some

of them he recognizes, from the documentaries about the Center.

Bonte sees many types of faces, but not a lot of eyes. Most species in the Milky Way are telepathic, much like the Trantorians. There are variations in body shapes, in the number of heads. Differences in the build of their limbs. Curling furs, extremely hairy species, smooth-haired, and naked ones. Almost nobody wears clothes, only a few are wearing shoes.

Telepathic. Almost all of them! They don't see his body, of course. They see his spirit. It hadn't sunk in so strongly before. They see … What he thinks? His feelings, whatever occurs to him. From how far away can they see him? His walls …

Suddenly, Bonte feels naked, despite his clothes. Perhaps more naked than his observers.

Before he can think it through, a rotating message appears to the left, within his line of vision. Bonte recognizes the sign. It was the first advice that the Board had adopted from him: an information sign that would determine the species of the observer, and then adjust the form of communication to that species, depicting information about the displayed animal. The sign is communicating in text. Visually. For him.

»The Terra Phenomenon: the Dutchman«, written in large letters at the top. Bonte sees a picture of the Milky Way, with a small red mark showing where Earth is located.

Underneath, in smaller letters, the factual information: »Region: Arm West. Type: Terran, oxygen-breathing. Origin: the Netherlands. Skills: none. Risk: none.«

The lowest half of the sign displays the election results. »Category biggest ego: 1st place. Category blatant self-overestimation: 1st place. Category boundless horniness: 1st place.'

His contract is for more than another four years, Bonte realizes. 'But did I check,' he suddenly wonders, 'if they were Earth years?'

My Top Ten Science Fiction Stories

MICHAEL K. IWOLEIT



Michael K. Iwoleit was born in Düsseldorf in 1962 and lives in Wuppertal today. He was educated as a lab assistant and studied philosophy, sociology and German philology. Since 1989 he is a freelance writer, translator, editor and critic mostly in the science fiction field. Apart from his literary activities he has also worked as a copywriter for advertising and IT industry. He is the founder and editor of InterNova and was the co-founder and long-term fiction editor of its

I have elaborated elsewhere why it is basically foolish to name the top ten achievements in whatever field and why it has, despite its obvious absurdity, still been done again and again, pronouncedly in the science fiction field more than in any other genre. My own selection, that I present here in an updated version, with some new entries and some runners-up that have dropped out of my top ten, was initially published in a short-lived short fiction blog the content of which was later incorporated into the World Culture Hub. Since I started publishing and commenting science fiction in the mid 1980ies, I have focused more and more on short fiction, first in our favorite genre and then in literature in general. A number of in-depth essays on major story writers that were well-received may make me seem like an approximation of an expert, but the short story is such a rich and diverse art form that I still know far too little and am still too limited in my views to make any definite judgment. (Recent researches into international writers for InterNova has made me aware of this anew.) Take the following selection as what it is: a subjective summary of what has left lasting impressions in the mind of an eternal beginner who might well have overlooked even better works than those presented here.

Adolfo Bioy Casares
THE INVENTION OF MOREL
1940

Bioy Casares' novella (it is frequently published as a novel which I think it isn't) made its author, a friend and co-writer of Borges, internationally famous. It is one of the greatest works of Latin American science fiction and fantasy. Readers who still regard science fiction as a primary Anglo-American genre may be surprised to find out that »The Invention of Morel« is a pioneering work that introduced the concept of virtual reality into science fiction long before cyberpunk was even dreamt of, even before Dick, Galouye and others first explored this concept. What lifts this tale of a castaway, who finds out that the idle residents of an unknown islands are only projections and includes himself into their endlessly repeated lifes, high above most other VR and cyberspace stories is its poetic language and the slow, masterful unfolding of its central enigma. It tells a lot about a certain ignorance in sf circles that few typical science fiction readers have recognized this work.

J. G. Ballard
THE VOICES OF TIME
1960

The history of science fiction could be written as the history of its great metaphors, the central emblematic ideas and concepts of a given period. The great metaphor of the Golden Age science fiction in the 1940ies was space as the new frontier. The main metaphors introduced by cyberpunk in the 1980ies were cyberspace and virtuality. In recent years artificial intelligence in its contemporary manifestation seems to become the central vehicle for science fiction writing in our era. One of the signature concepts in what came to be known as New Wave science fiction in the late 1960ies, the era of science fiction turning inward into inner space, was entropy, a physical principle expanded into a general metaphor for cultural, psycho-

German sister magazine Nova. In the science fiction scene he is best-known for his novellas and for his essays about major short story writers in science fiction. His latest book is a reissue of his novel Der Moloch. *His homepage is at mki.worldculturehub.net*

logical and ecological decay. Also picked up by mainstream writers (Thomas Pynchon's »Entropy« from 1960, one of the most analyzed short stories in postmodern American literature, may have provided some inspiration), it culminated in the science fiction field in two stories that were never surpassed in this specific subject. One was »The Heat Death of the Universe« by Pamela Zoline (1967), the other was »The Voices of Time« by J.G. Ballard, the flagship writer of the whole move towards inner space and after the mainstream success of his novel *Empire of the Sun* (1984) recognized as one of the leading British writers of his generation. A trademark of Ballard's prolific short story production in the 1960ies were atmospherically dense, seemingly eventless stories that turned urban and natural landscapes into symbolic reflection spaces for the shifts and displacements in the consciousness of characters in a state of estrangement and stagnation. The novella »The Voice of Time« is his quintessential work of this kind and interprets entropy, the unavoidable exhaustion of all energies and forces, as a basic condition of life in the universe: While human society dissolves in a mysterious narcolepsy, climate change causes adaptions to a new and different world in various species and extraterrestrial intelligences send a cosmic countdown to Earth, a doctor conducts a bold experiment to activate biological reserves in his own genes. The story's climax, when he is enabled to sensually perceive the surges and currents of time, is among the greatest scenes in science fiction.

David I. Masson
TRAVELLER'S REST
1965

In 2003, a small British publisher re-issued *The Caltraps of Time*, the only story collection by the Scottish librarian and casual sf writer David Irvine Masson (1917- 2007). With only seven stories in the sixties and three published later, most of them in Michael Moorcock's *New Worlds*, Masson may seem as a peripheral writer, nonetheless he is remembered as one of the most original

and ambitious contributors to British new wave sf, not least for this story, his first one. Masson had a preference for time phenomena and in »Traveller's Rest« he utilizes the narrative device of time acceleration and deceleration for a pessimistic vision of the human condition of epic proportions. The story follows the way of a soldier who becomes an individual while moving away from the frontline where an eerie war is fought against an invisible enemy behind a border of infinite time acceleration. Only seconds after his relief he is ordered back and years of private happiness shrink to split seconds against a war that may hide a secret of cruel irony. All this is explored in a story perfectly structured and rich in detail, whose unique conception has never been surpassed in the time travelling subgenre.

James Tiptree, Jr.
THE GIRL WHO WAS PLUGGED IN
1973

If I were asked if there has ever been a perfect science fiction story, there are two that would come to my mind, interestingly both influential proto-cyberpunk works. One is William Gibson's »The Gernsback Continuum« from 1981, a striking example of what can be achieved on just ten pages – provided a writer reaches this level of distinctness of language and imagery and such a precision in unveiling the hidden patterns of cultural artifacts. The other one is »The Girl Who Was Plugged In«, Alice Sheldon's / James Tiptree, Jr.'s masterful early take on recurring themes of cyberpunk, published ten years before William Gibson's style-defining short stories. Every conceivable virtue that a science fiction story can possibly have is present here: a suggestive basic idea, colorful, larger-than-life characters, a dramatically climaxed plot, stylistic elegance, linguistic inventiveness and a powerful imagination evident in the vivid depiction of a decadent future society. The tragic story of a disfigured girl, hired for covert advertising purposes as a remote control for a perfect, yet soulless female, has repeatedly been interpreted as an outstanding example of feminist science fiction about the

objectification of women. In contrast to the aesthetics of decay in later cyberpunk, summarized in the popular catchphrase »high tech, low life«, it always seemed to me that Tiptree's novella presents an upper class, power elite view of the same world that William Gibson's major works are set in.

James Tiptree jr.
HER SMOKE ROSE UP FOREVER
1974

Considering her lifework, I regard Alice Sheldon, who for many years hid behind the male pseudonym James Tiptree jr., as the greatest short story writer in the history of science fiction, surpassing even Ballard, Bester or Cordwainer Smith. It's hard to select a specific of her many outstanding tales. »The Women Men Don't See« could stand here, »The Screwfly Solution« and others. I personally find this subtle and beautiful work her most artful and original story. Barry Malzberg, who commissioned it for an anthology about the great topics of science fiction, called it the greatest post doomsday story ever written and it may well be. The story is composed of several episodes with a lasting emotional impact on the main character and only in the virtuoso closing sequence, one of the greatest prose passages in the history of the genre, the reader realizes that these are the traces of a man long death and fragments of a civilization vanished from Earth whose only remains are the most painful experiences of its members. In a separate essay I have explained why I think that this is maybe the greatest science fiction story of all time.

Barry N. Malzberg
A GALAXY CALLED ROME
1975

Barry Malzberg's controversial career and personality and his almost schizophrenic relation to the science fiction genre, that

he condemned as much for its failures as he praised it for its achievements, has turned him into scapegoat for sf purists in US and abroad. A major part of his short works (featured in his 1994 collection *The Passage of Light*) belongs to a subgenre that one of his publishers called »recursive science fiction«. Science Fiction about science fiction has a long tradition and many prominent sf writers from Dick to Silverberg to Michael Bishop and others contributed to it. No other writer, however, has advanced it to such an intensity of reflection and self-destructive loathing as Malzberg. »A Galaxy of Rome« is his masterpiece in this regard. It's not a story in the strictest sense of the word, but a series of sketches of a writer how tries to write a story in the Campbellian mode based on two articles by grandfather sf editor John W. Campbell himself. The attempts to explore the possibilities of a story that can never be written, interwoven with self-reflections of the writer, turn out to be much more exciting than a story in the Campbellian mode could ever hope to be. Few writers applied the techniques of postmodernism to science fiction – John Sladek, to name one beside Malzberg – and as this story proves it can be done with stunning results: turning sf into a kind of fiction that is a meditation about its own methods and conventions.

Carter Scholz
THE NINTH SYMPHONY OF LUDWIG VAN BEETHOVEN AND OTHER LOST SONGS
1977

One of the most serious downsides of science fiction as a subculture is a certain fanaticism and close-mindedness of the scene that has repeatedly kept talented writers from pursuing a long-term career in the field. Barry Malzberg has portrayed Mark Clifton (1906 – 1963) as the classic example of a writer who basically wrote himself out of the science fiction magazines by becoming too good. Authors of major works such as Hilbert Schenck (1926 – 2013) or David I. Masson (see above) have always remained insider tips and are almost forgotten

today. One of the greatest losses for American science fiction was the retreat of writer and composer Carter Scholz (better known to a general audience for his SDI novel *Radiance* from 2002) after a detour into the genre that mostly ended in the mid-1990ies with one collaborated novel and about forty stories, among them some of the most artful and intellectually stimulating works of their time. Kind of his trademark were time travel stories about famous composers and this one is perhaps the best of them: In an age when culture is depleted of own inspiration and musicians prefer to study the past instead of being creative composers in their own right, the invention of mental time travel allows historians to enter the mind of people of the past. Musicologists use the technology to witness the composition of masterpieces of classical music. The procedure, however, is not as save as was claimed by its inventors. Time-travelling scholars discover that they can influence the minds of their subjects and to help them in their creative struggles begin to provide them with snippets of the compositions that they are supposed to write. Past and present have entered a feedback loop. The inspiration comes from everywhere and nowhere and is about to annihilate itself. Upon entering Ludwig van Beethoven's consciousness during the composition of his Ninth Symphony, the main character, an indecisive young composer, becomes involved in an apocalyptic scene as hundreds of voices from the future keep Beethoven from conceiving his famous Ode to Joy. After his return the young composer finds that Beethoven's Ninth is forever lost and that it might not be the last masterpiece removed from history.

William Gibson
HINTERLANDS
1981

In an essay on Gibson I called him »a writer of surfaces, while not a superficial writer« and dared to claim that he became famous for the wrong reasons. The concept of cyberspace as

featured in the *Neuromancer* trilogy, which he his most associated with, is in my opinion among the most flawed and least inspired ideas in his work. Apart from the stylistically immensely influential opening chapters of *Neuromancer* his whole first trilogy, taken seriously, strikes me as a failure and as a novel writer he improved much in his later books. What I find most regrettable is that it has been rarely acknowledged what a fine short story writer he is. »The Winter Market«, along with Tiptree's »The Girl Who Was Plugged In«, may be still the greatest of all cyberpunk stories and a perfect expression of the main elements of cyberpunk aesthetics. »The Gernsback Continuum« is a clever, self-reflective programmatic statement of proto-cyberpunk and, as David Pringle justly claimed, a word-perfect piece of writing. »Hinterlands«, arguably his best story, belongs to a rare subgenre of science fiction that I tend to call »misanthropic sf«. In novels and stories of this subgenre humans are confronted with beings or intelligences high above their own level of technological or biological advancement and fail to convince those others of being rational creatures with their own dignity. Some of the greatest works of science fiction belong to this category, novels such as *Solaris* by Stanislaw Lem, *Roadside Picnic* by the brothers Strugatzky, *The Genocides* by Thomas Disch or *Pallas* by French writer Capoulet-Junac and stories such as »The Bees of Knowledge« by Barrington Bayley. »Hinterlands« is a worthy successor to all these. Humanity is portrayed here as a scavenger of higher civilizations and madness is the price it pays to live on their achievements. An unusually far-reaching concept in Gibson's works, this story is one of the bleakest visions of humanity's place in the cosmos of the last decades.

Ted Chiang
STORY OF YOUR LIFE
1999

For the science fiction of the new century's first decades Ted Chiang probably is what Australian Greg Egan has been for the

nineties: the best sf story writer currently producing (at least within the English language area). With a remarkable small number of works he not just sweeped sf's highest literary awards but proved that it is still possibly to write stories on the height of contemporary scientific discourse that successfully undertake imaginary and intellectual forays into the unknown (while many critics claim that our present has become so science fictional that the imagination of sf writers fails to convince any longer). »Story of Your Life« is among the best first contact stories in science fiction, fascinating not just for its refined, effectual structure (the story is, in fact, the tale of a mother directed to a daughter not yet born that she knows will die young) but for its scientifically sound, physically grounded speculation on how language might influence the perception of time. Ted Chiang has so far resisted the temptation to start on a big commercial sf career and only writes when inspiration hits him. Reading this story one may wish that he will continue to do so.

Guy Hasson
MOST BEAUTIFUL INTIMACY
2026

When Barry Malzberg included Tiptree's »Her Smoke Rose Up Forever«, a story he had commissioned himself for the anthology *Final Stage* (1974), into his own selection of the ten best science fiction stories of all time, he admitted his bias at the outset and threw himself on the mercy of a higher court. I have to do the same when it comes to Israeli writer Guy Hasson's perhaps greatest work to date. In the twenty years that we know and collaborate with each other I have become hopelessly biased toward Guy's short stories and he has never failed to fascinate me with the inimitable way he hammers out his ideas in short, staccato-like sentences. »Most Beautiful Intimacy« has confirmed my assessment that he is on a par with the great idea men in contemporary science fiction, writers such as Ted Chiang or Greg Egan, and it would be a honor if

InterNova could contribute to bring him a little closer to the international recognition that he deserves. To avoid a spoiler alert I can only hint at the extraordinary qualities of this short novel. Telepathy is one of the grand old themes of science fiction and setting a dramatic story in a world where telepaths have become a persecuted minority is no new idea either. No other writer, however, has ever approached this premise, as far as I know, in the way Guy Hasson does: When a woman, on the run with her husband, becomes pregnant, she begins to telepathically identify with the fetus growing inside her, which results in dangerous glitches of her own neurological functions. The twists and turns of the drama that enfolds are believably based on a thorough knowledge of human embryonic and neurological development, up to the near-fatal birth scene, a staggering climax as I have never before read in science fiction. »Most Beautiful Intimacy« will be included in the coming first printed issue of the new InterNova and our readers are invited to judge for themselves whether my enthusiasm is justified.

RUNNERS-UP

C. L. Moore
NO WOMAN BORN
1944

Catherine Lucille Moore's (1911 – 1987) influence on American science fiction and fantasy can hardly be overrated. Her story »Shambleau« introduced a dark, brooding sensuality into pulp fiction long before there was any talk of taboo breakers. Her unique collaboration with her husband Henry Kuttner (1915 – 1958) produced maybe the most original body of short works in sf of the forties. Her greatest works are perhaps among her novellas. The stunning opening pages of »No Woman Born«, one of the first and still one of the greatest cyborg stories, with their nuanced description of the artificially recreated dancer Deidre can convince even today's readers of Moore's

outstanding ability to evoke emotional states (George R.R. Martin in stories such as »A Song for Lya« was one of the very few who came close to her in this regard). Rarely has there been such a deep narrative treatment of a human being turned into something completely new and different as in the climax of »No Woman Born« when Deidre's comeback on stage demonstrates her newly acquired modes of expression. If sf critics will ever agree on a canon of sf, Moore's tales should be acknowledged as some of the genre's lasting achievements.

J. G. Ballard
THE WAITING GROUNDS
1959

When Ballard died in 2009 the obituaries in mainstream media proved that Ballard, who in the early years of his career was only known to sf readers, had long since found his place in contemporary British literature as one of its most original and radical voices. »The Voices of Time« and »The Terminal Beach« are widely regarded as his most important stories and readers may think that »The Waiting Grounds« is rather untypical, a story that sets out with a rather conventional sf setting on another planet. At the end, however, when Ballard with just a few brilliantly written pages turns the whole scenario upside-down, we are back on Ballardian home ground. His vision of a cyclical cosmos that is transformed and finally shattered by the rise of a super civilization is one of the many – and maybe the most fascinating – explorations of man's existential position in time and space in Ballard's early work. Although he focused in the course of his work's development on ever more private and intimate psychic states, the relations of the human mind to time and space remained one of his main topics, up to such disturbing visions as »The Enormous Space«.

Geoff Ryman
THE UNCONQUERED COUNTRY
1984

The sf of the eighties, probably perceived by most readers as the decade of cyperpunk, also saw the infusion of elements of magic realism (as blurred this label may have become by now, marking writers as diverse as Mo Yan, Mia Couto, and Haruki Murakami) into science fiction, most remarkable in the work of Lucius Shepard but also in this novella that made Geoff Ryman, who later turned to what he called »mundane science fiction«, famous in the science fiction field. One might argue that »The Unconquered Country« shares one basic feature with magic realism: the depiction of a harsh reality, seen through a weave of fantastic metaphors. But apart from this it is a work *sui generis*. Typical sf plot devices – biotechnology, living houses, artificial creatures for advertising etc. – are applied here to create a shifting reality that at a second glance can be recognized as Cambodia under Pol Pot seen through a distorting mirror. As in much of the best science fiction alienation and distortion serve to lead readers to heightened perception of reality. Ryman's story ends with a scene full with the forebodings of genocide and here fiction and reality again meet with devastating effect.

Carter Scholz
TRANSIENTS
1988

This is probably the least known story on my list. Published, as far as I know, only once in an anthology in memory of the influential sf editor Terry Carr, it is a neglected masterpiece of modernist science fiction. It's remarkable, however, that this touching and mysterious story despite the originality of its conception – it portrays a group of young people who move in unforeseeable time and space jumps through the United States – has some striking similarities with two other stories written about the same time, »Blue Shifting« by Eric Brown and »The

Save-Deposit Box« by Greg Egan. One may speculate if three writers reacted to the same undercurrents of their time by putting their characters into very similar existential situations. Whatever, »Transients« is maybe the best of this three masterpieces and displays Scholz in full command of his dense, reflected style and his sensibility for form and psychic states. The story does not resolve the character's strange affliction but closes at the end into a full loop and a powerful parable of detachment and alienation – recurring themes of science fiction that have rarely been approached with such refinement.