

Tremendous Tunes

By Accordion



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Music Special!

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Anonymous

The Chairbeing's Address

Greetings CUSFS.

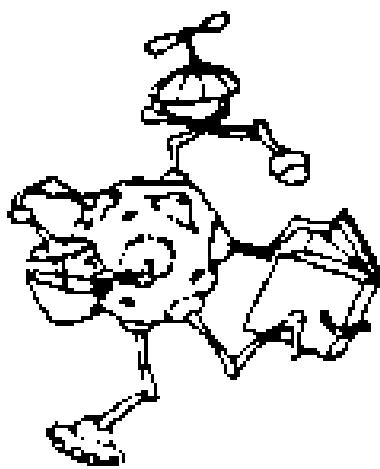
Another year, another sun, has been and gone. I have managed the benevolent task of holding onto my chairbeing power (you fools) and it is always amazing to see the society evolve and witness what makes it into tradition this year.

It's been a fun Michaelmas, and promises to be a great Lent, having found the kettle in the Pembroke NCR and with fond memories of the biscuits we ate. Tea, for I now make it tradition, should hopefully continue in our discussions. Always a pleasure to run films. For those new to the society, be excited for the joy that is Lent term films.

I have no doubt you will find this TTBA exhilarating, wondrous, creative and chaotic, as is the CUSFS way. However maybe slightly more organised with thanks to the editor and her google forms.

Olivia Morley

CUSFS Chairbeing 2017—19



A Note from the Editor

CUSFS, your creativity will never cease to amaze me. Our chainwriting efforts from back in Michaelmas took readers across the universe, from cities to deserts to approximately 50 different types of spaceship, throwing in the collective talent of *more than 80*¹ extremely bright and extremely genre-savvy people. I'm looking forward to the Chainwriting Extended Universe crossover event² (though bagsy I'm not on plot hole sealing duty).

But that's not all! This music-themed³ issue also boasts an entire fantasy opera, a serious academic discussion of alien music, several album reviews, and something I can only describe as Lidl Shop of Horrors (see what I did there?). There's everything from poetry to the Mummy. I suppose variety is supposed to be the Spice of Life (though I was never one for nights out myself).

Keep doing you, CUSFS. It's what you do best.

Yours scribblingly,

Sarah Binney⁴

TTBA Editor

¹ I'm shocked too! I didn't even know there were 80 people on the CUSFS mailing list!

² I promise I will ensure the combination of fantasy and sci-fi is perfectly balanced, as all things should be.

³ Completely by accident, of course. Great minds think alike, and all that.

⁴ You're not rid of me just yet.

The Tomorrow Gods

Bobby Vos, light_harted, A. A. Rispo Constantinou, Rory Hennell James, Ed H, Human, anon, Chua Jefferson Edralin, Shilin Chen, Tom Musgrove, Cayson, James Baillie

Kayla never cared much for the old gods of myth. But then again, she did not remember ever seeing them outside the temple hall. News of their arrival had spread across the village like wildfire and, notwithstanding the early hour of the day, had managed to attract a sizeable crowd to the central square. Old Yeran swore he had seen the heavens burst open in flame, after which he had noticed the group of strangers emerge on the horizon. Other villagers keenly supported the octogenarian's account in all but the most extravagant of details. Most striking, however—and it was in this that the strangers resembled most powerfully those divine heroes of yore—was their seemingly effortless mastery over the world around them.

Determined not to let superstition and rumour deter her from her naturalistic world views, Kayla manoeuvred herself through the impromptu congregation in an effort to subject the visitors to closer inspection. But as she emerged at the front of the growing crowd of spectators, the doubts she harboured to-

wards her people's newly discovered pantheon vanished for the briefest of moments. For she now saw clearly before her eyes the unfolding of magics she had never dreamt possible. Amidst this cacophony of colour and energy, she noticed one of the beings conversing with what seemed to be the leader of the group. She vainly attempted to catch a fragment of their conversation, but quickly returned her attention to the spectacle before her.

“Lieutenant, prognosis?”

“Bad, sir... We’re not getting out of here. Not on time, anyway. And certainly not by ourselves.”

*

Captain Crawley ran one hand through his hair and looked out over the crowd of natives surrounding him and Lieutenant Pierce. They looked most similar to small kangaroos except with opposable thumbs and a slightly flatter snout than the earthen variety. The had endearingly large eyes though and a colourful dress sense which immediately made Crawley take a liking to them.

Beyond the crowd was a square containing an impressive temple but, unfortunately for him and

his crew, nothing more technologically complex than you would expect to find in a medieval village. The Lieutenant was poking at her wrist strap, desperately trying to make contact with one of the fleet in the nearby space quadrant to tell them that they’d crash landed on wherever they were after being ambushed by the Swaleen.

Crawley noticed one of the natives manoeuvring its way to the front of the crowd, eyeing him, Pierce and the rest of the crew with what could only be called a suspicious gaze no matter what species you were from. Their eyes lit up briefly though as Pierce projected a hologram of their ships diagnostics into the air and examined it critically. There was an uncomfortable amount of red in the hologram and, working on the universal assumption that red in diagnostics was a bad thing, he felt duty bound to ask,

“Lieutenant, prognosis?”

“Bad, sir... We’re not getting out of here. Not on time, anyway. And certainly not by ourselves.”

“The ship couldn’t guarantee a gentle landing so beamed us down before crashing. We still have contact with it but location

systems are down. That bit of red means we don't have working orbital thrusters, this bit of red means the hull is too battered for repressurisation, and that bit of red means we don't even have basic life support – waste filtering and water purification are out. Orange says we still have power, for now, and somehow the entertainment systems have held, if that's any consolation. We need to make a full inventory to work out what we have left and— say, sir, do you think that kangaroo thing is getting awfully close?"

*

Kayla started as the sudden movement of one of the gods tore her from the lights. What she presumed to be the group's leader had begun gesturing, moving its appendages towards itself, and had dropped into a crouch. Curious, she approached. She noticed the other conversant began watching her intently. Undaunted, she stared back, with matched intensity. As their eyes met, a cacophonous orgy of sound erupted from the lights. Kayla made out a string of strangely coherent noises... "you're beautiful, you're beautiful, you're beautiful, it's tr—" ... before it stopped, as abruptly as it had begun.

"Well, that's the entertainment system down now, too."

The apparent leader stepped forward, looking right at her. It was much taller than any of her people. It walked on its two hindlegs with its back entirely upright, leaving its forelegs too far from the ground to run on, though

they looked far too skinny to provide much speed. It seemed to be mostly hairless, with fur only on the top of its head and a curious curving line below its nose. The creature stopped in front of her as her fellow villagers backed away behind her. It extended its forelegs with their slender toes splayed wide and opened its mouth.

"Greetings! We come in peace. Can you understand me?"

It seemed an odd question for a god to ask. Surely they could always be understood by their creations, at least when they chose to be.

"Yes, I can."

"Good," replied the leader. It then turned back to its fellow. "I suppose the ship must have beamed some translation microbes over as well."

"Have you come down from heaven?" asked Kayla.

"Well, we have come from across the stars. We sought to watch over your world for a time, but our craft was damaged, and we are now no longer able to depart."

This reignited Kayla's suspicion. The myths spoke of the gods as almighty beings of incredible power. How could it be beyond them to return to heaven as they pleased? As she pondered this, another burst of sound came from the lights... "*and I see, no bravery, no bravery, in your...*"

*

"Of all the artists to be stuck on..." muttered Pierce.

"Can you not?" asked Crawley,

slightly irritably. He felt he was missing something important. Luckily for him, Pierce had had the same thought, and filled in the gap.

"Did you notice what word the translators chose?" she asked. "Heaven!"

"Most pre-technical species don't have a concept of 'space' as we understand it."

Pierce was not dissuaded by Crawley's dissembling. "You know exactly why we have to be careful here."

Crawley did indeed know why they had to be careful. He wasn't too worried, though – the classic Chariots of the Gods scenario was all about displays of supreme power, and didn't tend to involve admissions of impotence.

Both he and Pierce paused. Hopefully the creature would try to communicate again; that would help them determine how much of their hand to play.

*

Kayla was thinking hard; she was perfectly capable of a process of elimination. Could they be of the material world? Clearly not – they could travel to, or at least from, heaven. Could they be gods? Clearly not – they could not return to heaven with but a thought. In fact, they seemed to have been barred from heaven...

What did that leave? She didn't know of things that were like gods but the enemies of gods, but if such things existed, then surely they must be hindered in every way. There was still a chance that it was all a misunderstanding, though, and in truth

she was scared of opposing such beings.

She paused. Hopefully the creatures would try to communicate again; that would help her determine how much of her hand to play.

*

Pierce's wrist strap lit up. "Ho, Captain, looks like we've receiving a transmission of some sort."

After some brief fiddling the face of a young woman appeared on the hologram.

"Captain, Lieutenant, what happened?" she asked, more out of curiosity than anything else.

"Swaleen ambush. They took out some major systems. We were repairing them but our trajectory crashed us on this planet. Although it's already occupied. What should we do? Our ship's damage is beyond the point of the self repair mechanisms, we need someone to come down here."

"Forget about that for now. You say the planet is occupied?"

"Yes Ma'am, they're small kangaroo-like creatures. See for yourself." Pierce replied whilst panning the camera on her wrist strap. "It seems their language is sufficiently similar to ours for the translation microbes to make reasonably sensible conversation."

"Good. I have a separate mission for you two. While passing through this system we've been detecting radioactive trace elements and subatomic particles in ratios not emitted by any human engine. Some with very long half lives. The non-interference stud-

ies on this planet show that the community social life is built around their gods and yet they have had only this one temple for all this time. On closer inspection it seems to be quite a structure compared to the rest of their architecture. I think someone's been and gone long before us. I want to know if they left anything behind."

*

In a nearby settlement, two monks seemed to be taking part in their morning prayer ritual with their heads respectfully to the ground. However, if you dared approach the worshippers you would have seen iron granules oscillating on the sand were the subject of analysis. Under their hoods there was an unmistakable luminescence, switching from red to blue, providing an eerie glow to their huddle. The fluctuations were so rapid they would have been dismissed as a trick of the eye.

Within the quiet muttering one uttered, "Do you see these field formations? This is not from Earth. Stage one of our plan is in motion. They are here."

The other in muted tones replied, "A ship was successfully targeted within the radius of the gravity-warp generator?"

The leader confirmed, "The field forces have changed, they are 20 degrees West from here. Our gravity storm would have completely destroyed their ship. As we used Swaleen technology we are safe from suspicion. I assume we have three sunrises to find them before self-replication of their cellular engines is com-

plete."

The monks giggled and the flickering stopped. Within the dark corner no one could be seen.

*

Kayla stilled as the strange beings' whispered conversation broke apart, the apparent leader approaching her again while the rest watched in silence. Even the maelstrom of lights dancing around them slowed to an halt. The leader, seeming hesitant, produced a strange hacking noise from its mouth.

"We find ourselves in a quandary. We would like to visit your temple... to divine the... path we shall take."

The fumbled explanation only fed her suspicion. If these creatures were gods, why would they seek the temple's guidance? Then again, if they were truly banished from heaven, as she had hypothesized, surely they knew better than to trespass on holy ground. But before she could come to a decision, another person toppled out of the still-growing crowd, skidding to a stop beside her.

"I shall bring you to the temple, honoured heroes," he shouted, clearly out of breath. "Please allow this lowly scholar the privilege of being your guide."

Kayla recognized the junior disciple of the temple. Insufferable, yes, but most steeped in doctrine amongst the villagers. If he judged these creatures divine, who was Kayla to disagree? Yet...

"I graciously accept your offer, Sage..."

"Seryn!" he gasped, delighted at the address. An honorific reserved for the most respected of elders, now bestowed by apparent godly authority with such thoughtless abandon. Kayla wavered, feeling something was *off* about the entire situation.

Nevertheless, this was clearly out of her hands at this point.

If nothing else, once the temple judged, the truth would out.

*

The villagers all lay on their backs surrounding the temple, leaving a narrow passage way for them to come by. They were chanting, under the lead of a monk whose gaze reminded Crawley of a hibernating black hole, a caustic mewing song. When Crawley approached, they knocked him with their foreheads, half admiring, half cautious.

"Ah, disgusting..." Pierce tried to avoid the kangaroos' curly hair.

Crawley gave him a warning gaze. In the temple, the luminescent granules were vibrating slightly, like hungry hunting hounds excited by the approach of prey. Sunshine shimmered a bit as well. At the same frequency. But no one noticed.

As the heavy wooden door banged close behind them, there were only Crawley, Pierce, the gloomy monk, and junior disciple standing in darkness. Crawley noticed a smaller figure sneak in — the strange native who had eyed them suspiciously? — but he had no time to care. In front of him, raised a light so pure, so

holy, of a color that Crawley had never seen before. He didn't know how to describe it.

However, before Crawley took out his Collector of Unknown, something moved. It roared up, fiercely, and, like a lightening, seized Pierce. He was shaking, as if electrified, but with a look of ecstasy and transcendence, as if struck by something supremely beautiful.

And before Crawley managed to react, Pierce fell to the ground, motionless.

*

"As I thought," said the monk, perfectly calm. "False gods; cast down from Heaven by the Higher itself. Seize it."

This last sentence was addressed to Seryn, who nervously moved towards Crawley. Instinctively, he drew his gun, aiming it at the disciple, who appeared to understand the gesture and halted. Out of the corner of his eye, Crawley noticed the first native slipping away, further into the temple.

"I might not be a god," Crawley said, trying to keep his voice just as calm, "but I'm not completely powerless. Attacking me would be far too much trouble for both of us."

The monk tilted his head, and said, "It is our duty to defend ourselves against the enemies of the gods. If you think you can threaten us, you are incorrect; we will defend heaven to the last."

"You don't understand," said Crawley, abandoning all protocols. "We haven't come from any heavens or hells. There are no gods here."

"A clear lie," said the monk. "Deceptions as unworthy and ineffective as your disguise. You cannot shake our faith."

"How can you be sure?" said Crawley.

The monk only bared his teeth — perhaps a smile — and turned his eyes away from Crawley, to the central altar, where once again, the light that had consumed Pierce welled up and spread, as beautiful and incomprehensible as last time; and then it began to coalesce into a shape that filled Crawley with a strange apprehension and fear.

Why, said the light, because I am here for them. I have been here for a very long time. But perhaps no longer, now that you have arrived.

The mysterious light had now taken the form of what Crawley could only describe as reminiscent of a human male, and in fact, judging by the familiar stature and slowly forming features, it was starting to remind him of... Pierce?

"Who... What are you?" Crawley asked cautiously, his gun now aimed squarely at the mysterious light.

The light continued as if it didn't hear him, or maybe didn't care to hear him. *Finally. Soon I will be ready to make the transfer.*

The other monk flashed a smile, and then seeming to remember the role he was playing, quickly caught himself and turned to the unwanted witness. "Leave us, disciple." Seryn hesitated, but dutifully obeyed, throwing on his cowl and scurrying into the temple.

"Don't worry, human." The monk continued, "Your friend is fine." *Better than fine.* The light was becoming more and more defined, and it was now unmistakable that it had taken the form of Pierce.

"There is no need to be afraid." The monk said ponderously as he began to pace back and forth. "You see, we too, were explorers from another world. When our ship crashed centuries ago, we were forced to take refuge in this temple. But this is no ordinary temple. No, it is an ancient and elaborate machine, which the 'gods' used to take our forms and leave our consciousness trapped here. Since then, we've been confined to these light forms and occasionally possessing some of the senior monks. But now that you and your ship are here..."

As the monk monologued, Kayla found herself forming a daring rescue attempt as she slipped on the robe from the unconscious junior disciple.

Like the kangaroos they resembled, the Atarebs of Suberpeta-sus V were herbivores who had never really developed weaponry. This, the monks had long

since appreciated. Like the kangaroos they resembled, they packed one hell of a kick. This, one monk in particular was about to become extremely well acquainted with.

"Disciple! Why have you returned?"

Kayla was already in the air. Two large, heavy feet impacted on the monk's chest and it staggered backwards. The glowing shade of Pierce drew closer to the human's prone form, though...

Crawley lifted his pistol and fired a shot, which of course went straight through the light-creature. His mind was strangely sluggish looking at it. It was *beautiful*, he thought. *Angelic.*

She smiled at me on the subway...

The earworm words floated into his head. Subway. His eyes wandered down below the creature. It had to have come from somewhere. The handle of a trapdoor beckoned.

He lunged for it, skidding over the flagstones, hauling it open. Lights whirled, his mind blanked. From light, he slipped into darkness.

*

The two unconscious gods had been hauled outside. Arguments were few, but Kayla was in no mood to brook dissent and she was the one who had emerged from the temple, lightless for the first time, a strange smoking pit at its heart, weapon of the gods in hand.

"Are you alright?" one old Atareb asked, nervously pawing at her robe.

"I won't lose any sleep on it." She looked at the still broken human ship. "I've got a plan." •

Bonus Material

Alternative titles: *False Gods*

"I'd like to register my surprise at Lieutenant Pierce's transformation from female to male halfway through the story, not commented upon by any of the other characters. On the other hand, many religions do hold their gods to be above human genders and able to shift between them at will..." — Tom Musgrove

THE EDITOR now joins 327,000,000 people in getting [James Blunt](#) stuck in her head, thanks for that, chainwriters.

CITY SENSE

Anonymous Mathmo, Sally Wagner, Louis Hypothetical, Rachel Foreman, Rebs,
Jonathon Cushenan, anon, Anna Mustata, picturesquerain, Samos

They say this City never sleeps. On a Friday night, this statement is more evident than ever.

The doors opened with a muffled metallic clanging, and I stepped into the train's carriage. The stale air was filled with the clashing aroma of sweat and perfume of a thousand commuters who had ridden this train today.

And yet, there was something more than just a mere smell. As a soft feminine voice announced the next station, I shut my eyes and took a long deep breath, feeling of utmost tranquillity entering my mind. When I opened them and breathed out I could sense a surge of energy passing through my body.

Immediately, a whole new world appeared in front of me. Now, I could really see people. Just one glance was enough for me to feel the emotional state they were in; with a little more focused effort I could delve into their dreams, troubles, fears...

Though not quite the rush hour, it was a Friday night after all. There were plenty of people in the carriage, their emotions and thoughts weaved together into a strange, mesmerising symphony

that only I could hear. For a minute or so, I just thoroughly enjoyed it, letting the sound flow gently through my mind.

Then I started to make out the specific emotions, instantly connecting them with their sources. A solid-looking man in his forties, pretending to read a newspaper - but all I could sense from him was guilt, lust and... shame? He was about to pay a visit to the Red Lantern district - the fact that he left at Midtown Commons confirmed my guess.

Suddenly, amongst all the emotions I could sense, a new one emerged - the one of utter surprise, which then grew into anger and disappointment. My curiosity piqued, I started looking for the source - and found it: a woman with dark hair and swarthy skin - had we been in New York, I'd guess she was a Latina. And had we been in a bar, hey, I'd even take my chances with her.

She noticed me as well, and started heading in my direction with a frown on her face. Her eyes expressed extreme disdain, so, trying to figure out why, I probed her.

Bad idea. Not only did I gain nothing, it somehow made her even more mad at me. Why?

Was she aware of what I had been doing?

The woman finally approached me and asked through her teeth:

- Can I see your permit, please?

Baffled, I showed her my driver's licence. She quickly touched my hand and everything around me suddenly went grey and blurry. While I was trying to adjust myself to new reality, she kicked my leg, which made me fall on my knees.

- You are under arrest for unauthorised energy withdrawal and mind intrusion; you have the right to...

Meanwhile, I was too scared to protest. Unauthorised energy withdrawal? The woman had transferred me to some weird place with just one touch, it wouldn't be sensible to argue with her.

When she finished talking, she took out an iPhone X, called somebody and said:

- Hey, it's Agent Garcia. Can you believe it? Tonight could be the biggest night in my career, but, no, I get a frickin' leecher in my way! We got standard charges - withdrawal, intrusion...

Wait, what did she call me? A "leecher"?

- No, his permit hasn't expired. He doesn't seem to have one to begin with. Doesn't exactly look like he could afford one, either.

She glanced down at me; a scrutinizing look on her face and her upper lip curled in disdain. I wanted to interject, tell her to stop insulting me; but nothing more than a short whimper escaped my lips. I could feel her put a hand on my shoulder, as if to prevent me from getting back up on my feet.

- He probably hacked his way in. Guess I'll have to bring him in for questioning.

She paused for a moment, and let out a small snort.

- No, wait, don't, I'll be there shortly. Just give me a minute to bring this guy to headquarters and then – No, you cannot go in without me, this is my case as well, Brown! I mean it, do not hang up on me! Do not – Oh come on!

For a split second she just stood there motionless, staring at her phone screen; before redirecting her attention back to me. I didn't even have to access her mind to know that she was furious. Her clenched jaw, flaring nostrils and glaring eyes were evidence enough of that. Abruptly, she grabbed me by my collar and pulled me back into a standing position. Now, her face was so close to mine that I could feel her breath on my cheek as she spoke.

- I'll be damned if I let someone like you ruin this for me!

As she was saying that, I could feel something cold touching my

wrist, before hearing two metallic clicking sounds. A short glance down at my hands confirmed by suspicion that she had just handcuffed us together.

- You are coming with me, leecher.

As she led me through the building, I caught glimpses of the outside world through the windows in the rooms on the corridors. The buildings looked taller, and even denser for Uptown Manhattan, but less modern, as if technology had outraced architecture. The Latina woman dragged me into a lift, and it shot up. I hoped that when I got to the floor we were headed to, I'd be able to see further, and figure out where, and when exactly, I was. The bell dinged on the 1970s era lift and I was in a dark corridor connecting to dark rooms, all held up with damp iron beams and rusting bolts. This floor could just have easily been underground, with a door leading onto the subway tracks, but there were black painted over windows, with specks of light peeking through forming lines on the concrete floor.

Walking further, some rooms had gallows, racks and nooses in them. *Wonderful*, I thought. I imagined that she would take me into the big room at the end of the corridor with the iron door, but she instead pushed me into a room on the side a few doors short of that monolith, where the natural light had finally started to make its way into the dingy passage and the bunker aesthetic had changed to a "1950s hotel in the 2050s" design, rubble and all. She sat me down on a surpris-

ingly intact chair and got out her phone again.

- He's here.

Her eyes pinned me down with a steely glare, as the person on the other end of the phone responded. I couldn't make out what her next instructions were but from her composure I didn't feel confident. I considered probing her again, but then thought better of it, and composed my face into what I could hope looked innocent and slightly confused.

After what felt like the longest and most awkward staring contest, I heard someone working the door handle to come in to our room. The sound of this broke the spell of Garcia's gaze and with a firm 'Don't you dare move' in my direction, she went to respond to the door. I suppressed an urge to crane my neck and see who it was. Instead I used this welcome distraction to try and figure out the room for any possible escape routes. We appeared to be in an office of some kind, with shelves lining the walls and a battered cabinet in the corner. The desk that Garcia had been leaning on was covered in files and the drawers were a shambles, as if someone had been searching for something in a hurry.

I heard the door close and Agent Garcia's footsteps returned in my direction. She came back into my line of vision and I saw she was now carrying an ominous metal instrument and a thick paper file.

- So, leecher, are you finally going to tell me what you were doing hanging around the station

this evening?

I met her gaze, well aware that whatever I say may change the outcome of my situation. I could pretend I didn't know what she's talking about... but Garcia was obviously aware of my ability. Ugh, why did this woman have to constantly accuse me? My frustration gets the better of me.

- Look, Garcia is it? I'm sorry but I don't know what a 'leecher' is, or what permit I may need to just listen to the world around me. So maybe you could answer these questions for me? After all, from my perspective all I have done is taken a train home and listened to the world around me. Then you abduct me and accuse me of being something I don't even know.

Garcia's frown deepened, and I began to panic, but then her frown slowly dissolved and she looked at me with a curious expression...

- You call it listening? Where did you say you were from again?

- Queens, lived there my whole life, well, as long as I can remember.

- Your parents?

- I don't know...

She gave me a withering look and I wish I could have given her an answer.

- Fine Mr-I-don't-know-where-my-parents-are-from. Why don't you tell me how you 'found' your power?

I took a long look at her, this woman was clearly crazy.

- How can you 'find' something you've always had?

Confusion flashes across her face and I hear her mutter quietly:

- He was born with sense? Let me see.

Garcia came closer to me and put her hands over my temples. I instantly felt a connection, like hearing a third person pick up the receiver on a two way call - intrusive but subtle. As if I was another filing cabinet in this office, she flicked through my memories trying to find what she was looking for.

- Think about the first time you used the sense.

It was as if her words were a command and I instantly recalled the moment. I was back at my first home. I was one of 12 kids living there and our foster parents were drunks. They were having a fight over something stupid again and I was hiding in the pantry, hoping not to be noticed. I had sneaked in to grab a bar of chocolate when they brought their argument into the kitchen. I could feel my heart racing and palms sweating as their argument grew more heated. It was then I felt a surge of power and an increased sense of what was around me.

Quickly, the shouting brought me back to the room and I peeked through the slight opening in the pantry door. My foster parents were still fighting and it was getting worse. I could see their anger and their discontentment with each other. My foster dad was furious but that was just on the surface. Inside he was dealing with so much pent up disappointment about his current situation. He felt powerless to

change anything in his life and so that's why he drank. All of a sudden my head felt very heavy and my thoughts thick like wading through cement. The next thing I remember was waking up in the hospital and told I couldn't go back to that home. They wouldn't host a sick child.

Garcia removed her hands from my temples and took a step back. The confusion on her face had morphed into an off mix of shock, horror, and...awe?

- It seems you're telling the truth. That's.. You're... This shouldn't be possible.

- What do you mean?

- Queens, you said. You've spent your entire life there?

- Yes, but why does that matter?

Garcia ignored my question and began pacing, murmuring under her breath. I couldn't make out her exact sentences, only managing to grasp something to do with gateways, transports, and special academies. I sat in silence for a few minutes, but eventually my patience ran short. All I wanted to do was get home, and as far as I was aware, I'd done nothing wrong, nothing different to my daily routine.

I closed my eyes, took a deep breath and listened. Garcia was the only other person in the room, so I focused in quite easily, and, just like on the train, her emotions somehow were much more distinct than most, yet at the same time they were much harder to grasp. As if her mind was a mansion compared to thousands, millions of smaller houses, yet with the mansion

came much higher security measures – easy to notice, hard to get in.

But I was determined, and she was preoccupied – probably the only reason I managed to get in for as long as I did. On the surface she was annoyed, stressed, flustered, confused. I went in a little deeper, trying to find the exact source of confusion, the reason she was so troubled. As I went deeper, jealousy also emerged, and finally I got a series of blurry, unfocused images, a sequence playing out like a film. Two adults listening into a sulking child's feelings, a teenager walking around a massive academy campus, hours of sitting in a room focussing on retaining on thought, graduating – walking across the stage proudly, receiving a police officer's badge, but a different badge to what I was used to, and then finally, this one tinged with pride, receiving a tiny fingernail sized chip, blinking, and being on... another planet?

Before I could probe any further, her mind withdrew. It felt like a steel door slamming shut on fingers that couldn't pull away fast enough and I reeled back, too stunned at first to register the fury in her gaze.

- I was willing to cut you some slack because it seems like you really haven't got a clue... but you will *not* use the sense on me without permission again, you understand? Otherwise I may well just pass you on to someone less willing to account for your circumstances. God knows dealing with you is a headache I don't need...

Her words were sharp with annoyance and more than a trace of condescension, but as she spoke, I watched the flash of anger fade and thoughtfulness seep in to take its place.

- I'm sorry...

I began to stumble out, mostly because I felt something of the sort was expected of me. My ability to listen was the one thing in my life I had never expected to have to apologize for, mostly because I'd never expected to have it known. A small bubble of loathing welled up in me towards her for stripping me of that.

- Save it

She snapped.

- I can't hand you over – not at until I know why you were dropped off on earth at least. For my own peace of mind, if nothing else. I could always...

Her brows creased and I watched a knot of conflicting emotions roil over her; snatches of excitement, trepidation, guilt. Finally, they seemed to clear out and crystallize into a solid determination.

- I'm not leaving you here to run amok, either, though. You'll be coming with me.

I stared at her in incomprehension. Something about the phrasing of her words pulled at an assonant chord within me.

Still feeling dazed from the eviction from Garcia's mind and the tumult of my emotions, I only caught the tail end of her conversation on her phone.

- ...damn it, Brown! You and I

both know you can't take on the feeders on your own. I already have your location and I'm moving in. I'm bringing the kid too, he can't be left on his own.

Realisation struck me like a bolt to the chest. Tributaries of emotions converged into a seething mess: the thrill of excitement at being an insider privy to something for once, quickly subsumed under the simmer of resentment at having my ability castigated when it was as part of me as the sky and sea were the halves that made whole the world.

Woodenly, I followed Garcia back through the way we came, or at least I thought it was the way we came. The speckled bands of light peeking through the darkly painted windows were strangely dizzying. We came to a halt outside a nondescript metal door that slid open to reveal an airy chamber and a platform that overlooked a set of subway tracks.

The train that pulled up looked every inch like the usual train, except for the flashing "DO NOT BOARD" printed in neon red and the blurring echo of its outline that lingered when you stared a little too hard.

We climbed aboard and sat facing each other in a corridor coach compartment. The train starting moving. A fluorescent light flickered, darkness dancing over us. I wished I'd spent less time feeling emotions and more time learning to read faces, because Garcia's was doing something interesting. At last she sighed and made eye contact.

- This fucking night. Okay, I'm going to take you home. But first I've got a job to do. It's going to be dangerous, so I need you to try not doing anything stupid.

She paused.

- Do not, I repeat, do not try getting into anyone's heads. The beings we're about to encounter are playing a whole different game. You getting this?

I responded to the only bit which made sense.

- You're going to take me back to Queens?

She winced.

- Little bit further up than that.

- As in Yonkers up?

- As in a couple of million light years up.

I wondered then what my thoughts and emotions would sound like right now to someone listening to me. I wondered if said hypothetical listener would be willing to clue me in.

- So, were you looking for me?

She snorted.

- Please. I just picked the wrong train carriage. You know what this city is like.

As I sat there, it didn't feel like I knew much about anything. But without a doubt she was right about this City. It might never sleep, but maybe I was waking up •

Bonus Material

"The chain was supposed to be some kind of grim urban fantasy... and it somehow turned into science fiction by the end, with a narrator as an alien? That's chainwriting for you." — Anonymous Mathmo

THE EDITOR needs more genre-switching in her day-to-day reading.

STOWAWAY

paulinia, Michael Lee, Rex, Ygerne Price-Davies, anon, G Lithglow, anon,
Bass, Olivia Morley, Danielle Saunders

"I want a job."

A hall suddenly fell silent. A door was wide open, a girl was standing in it.

"I want a job," she repeated impatiently.

"What the fuck are you doing here?"

The girl shrugged and sighed, annoyed. "I'm Rose. And I like to kill people."

Several men burst into laughter. Rose, as the girl called herself, was at least two heads shorter than even the shortest of the men and didn't look for more than eighteen.

"We may have a different job for you girl," a man perversely laughed.

"This is all the same," Rose sighed. "Fuck you."

Before the men could even move, Rose shot a first one. After a second man fell lifelessly to the floor, guns started to appear in their hands too.

"Pathetic." A laser gun showed up in her left hand. "You could have hired me." No man managed to shoot.

After a check of their guns, Rose once again sadly concluded that all the mafias were so outdated.

The unloaded gun returned into its case and Rose to the street. It was a starry warm September night, and Rose felt bored. When she finally completed her revenge, her life became empty and void. Occasionally she would think about getting a new identity and ending her killing spree, but... no. Not too thrilling. Then a genius idea sparked inside her mind. Getting a job! Humans must need some contract killers. Rose sighed. Humans were so backwards, but getting back to the Community was impossible.

*

The Street was the largest human-made structure in the Greater Earthen Galactic Metropolitan Area, the outermost ring of that clanky Dyson sphere they used to call the Sun. How many miles? Rose wasn't sure, and nor did she really care to find out. Growing up on a junker, passing through this gate and that, there came a point where distances just ceased to be impressive. When the Sun had finally given up the ghost, local GEGMA legislation forbade the junkers from moving in on the rings.

And so, Outertown prospered.

Prospered, that is, as an equator of decadent hangars, seedy bars, and those weird flophouses where you plugged yourself in. Rose looked to the stars, beyond the great glass buckyballs which made the ring look like a giant rope of toadspawn.

Rose was not a superstitious girl, but having been born in May she knew her sign was Coca Cola. They were the great corporate constellations, haphazardly rearranged for the cost of entire systems' resources. Her sign was nestled between those of SamsungSony and Walmart, though she looked past these, into the periphery of the dome, at the classifieds.

Much smaller arrangements, individuals who, somehow, had raked up the cred to have a message laid out. There was a lonely hearts page; a second-hand car on Venus; a guy made of dots and lines. And, just south-west of those, crude starspeak glyphs:

WANTED: INTERDIMENSIONAL TRANSPORT TEST SUBJECT. NO EXPERIENCE NECESSARY. APPLY TO 33 SERENDIPITY OUTPOST

Rose read it again, made a note of the address, and smiled. A job?

This would need careful consid-

eration. She wasn't an idiot; everyone these days knew someone who'd volunteered as a test subject for something or other and had either not returned or had unspeakable things happen to them. She'd heard tales of extra limbs, phantom sensations or even people going blind from various experiments. Sure, she wasn't an idiot. But she did need credits, and a fix.

Serendipity it was, then. Rose decided to employ her usual travel tactic of stowing away on several different frigates and lightships. Sometimes she got caught and used it as an impromptu training session, but it was accepted these days that people stowed away and so most pilots and crew turned a blind eye.

The first ship she chose was a converted cargo pod, likely stolen. Its manifesto said it would be leaving in half an hour, which gave Rose enough time to hunker down in a crate inside a ship. Luckily, the cargo wasn't anything that had ever been alive, so the conditions in the crate were bearable. Rose felt the engine's vibrations rumbling through the bottom of the crate as the ship left dock. This particular pod was bound for Patience, a small colony world in the same quadrant as Serendipity, and Rose was pleased to find it was hauling nutri-bars. She took a handful and stuffed them into her pack, tearing the film of another and swallowing it whole. Small, enclosed spaces like this crate reminded her of the junker she grew up in, and before long Rose was cautiously dozing with one

eye open and a hand on her nearest gun.

Erratic visions of intimidatingly tall trees with swaying leaves came to Rose through her not-quite sleep state. She had only ever seen such a landscape in the ancient travel magazines of the vintage book shop she used to hang around before GEGMA legislation outlawed such places as 'a thorn in the side of modernity'. She stood staring up at the infinite stretch of branches upwards, overwhelmed by the unfamiliar green. Something brushed against her ankle - an irritating, itchy sensation. She shook her leg absent-mindedly. The itch persisted. She shook again. It lingered still. She reached down more forcefully this time to brush whatever it was away and then felt the sharp twinge of two sharp teeth in the back of her hand, plunging her back into the 'real world'.

'Goddammit!'. Two huge eyes blinked at her through the darkness. She recognised the distinctive appearance of a grozzel, small and raggedly furry with three spindly legs - one of the enslaved creatures imported from the neighbouring galaxy to serve the elites of GEGMA. A tentative moment of intersubjective acknowledgment passed between them.

With a piercing abruptness, the crate lid was unceremoniously ripped off by a black leather glove. The glint of a painfully familiar violet iris imprinted itself onto the back of Rose's skull. She inhaled an anticipatory breath as her new companion scurried its way to safety under-

neath her khaki jumpsuit.

'Aha! Roses are red, violets are blue, what good fun you're not dead, I've been searching for you!'

Rose remained calm; although she dreaded to imagine what cruelty was hidden within the remark, she knew it wasn't meant for her. She felt a slight tremble come from the furry lump now pressed against her back.

'Gryp, it's been a while,' Rose muttered gingerly.

Without acknowledging Rose's remark, the violet iris changed to a brilliant blue and began to sweep up and down the length of the crate. As that same moment, Rose felt a sudden movement beside her, as the grozzel leapt from its hiding spot and launched itself towards the top of the open crate. In one swift motion, the gloved hand surged forwards and plucked it from the air. The grozzel was held at arm's length, writhing as it tried to escape its captor.

Each and every time Rose had encountered Gryp before, it had never been a pleasant experience. Watching the three legs flail frantically as the little body squealed from within the enormous hand (the android was aptly named) Rose was sure this would be no exception.

The two tiny holes in the back of her hand ached a little.

Ignoring her completely, Gryp began to turn away; the pitiful cries died down in intensity. Rose stood up within the crate and watched; without conscious thought, Rose found the laser

gun in her hand once more. She aimed and fired, causing a huge explosion of sparks. The grozzel jumped free, scampering over towards her crate. Gryp looked back over his shoulder.

With a squeak the grozzel took a flying leap, caught the hem of her shirt and scampered up to wrap itself around her neck where it remained, shivering and chattering nervously to itself.

The Gryp had turned to face her and was raising his arms to fight, but Rose was already up and firing.

Two shots and the sensors hidden behind his vibrant eyes were out of action. Blinely the gloved hands reached out. Rose ducked, and stepped back, the grozzel's claws digging into her neck. Long experience had taught her that the trick was to stay out of range of its, ahem, grip.

A stroke of luck, and the Gryp's foot caught on the edge of a crate sending him sprawling forward, giant hands grasping only at air. Rose was moving before he hit the floor, up and onto his back, yanking the powerbank out in one smooth move.

The Gryp stilled and fell silent, and the world did too. Rose looked out the window, grozzel warm about her neck. They had arrived.

Patience was a rather unimpressive world, consisting of nothing much other than wilderness and a few run-down buildings. As she crawled out of the crate, Rose discovered that its nights were particularly chilly – the feeling of the grozzel shivering around her neck was very unusu-

al, and quite uncomfortable. The stars were hidden by thick fog which seemed to seep into every corner. Rose was grateful for it, though, as it provided good cover.

It didn't take her long to locate a small ship bound for Serendipity. Indeed, all Patience really was was a place for ships to land before heading off to more interesting destinations. The ship was leaving in a few minutes, and as it did, she couldn't help but shudder at the loud, clanking noises it made. Even her junker had never sounded quite so ancient.

Luckily, the journey wasn't all too long, although the ship was advancing at a painfully slow pace. Rose was more than relieved once they landed on Serendipity. Unlike Patience, which was about the same size, everyone had heard of the outpost. Few people had actually been there, but it had become quasi-mythical over the years, due to it being so close to the edge. But Rose was not impressed by tales and superstitions, and as she stepped out onto the metal-covered surface of the planet and looked up at the tall buildings stretching out across the horizon, she almost felt excited.

The air smelled like over-cooked salmon, reminding Rose of the night when she completed her revenge. She sneaked into Chamber-X900, expecting to inhale some ozone, probably sulphate also, while the ghost of salmon just crowded the space.

There was no time for flashbacks. Carefully, Rose covered

her skin with sprays, and put on gloves and contact glasses. She had to be careful. Biological information business was illegal, but the huge demand around the outpost boosted the black market. She knew it so well.

The familiar salmon smell almost drove Rose crazy, alerting her about the possibility of having the wrong destination, or worse – maybe her 'completed' revenge was a failure, and those Elites still lived and took it as a joke.

S-transport was easy to find. It was the largest transportation company in Serendipity, famous for exploring new worlds. Its logo appeared on most of the buildings. While inside one window, an orange projected structure caught Rose's attention. That bright orange flame looked like a moon cake being bitten by a crocodile.

Rose took a second glance. She must have seen the same crocodile bite elsewhere.

The Chamber! She downloaded a copy of the static memory after sending the men into ever-lasting silence. The crocodile bite was in one of the GEGMA-related files.

If GEGMA wanted to dip a hand into interdimensional transport, Rose was certain that they could just use the slaves as test objects. Why are they hiring? It stank of conspiracy, and of connections to some of her past missions of revenge. Rose felt her heart quicken as a grin spread across her face. For a contract killer without a job, this was *perfect*.

"I want a job", she exclaimed.

After kicking the door down, naturally.

The gathered people in the room did not question her entry methods beyond a bit of scowling at her lack of manners. It was one of the warmest receptions she had had in a while and she smiled at the thought these might be assassin-friendly-people.

A young representative led her further into the facility, Rose craning her head to catch more glimpses of the orange structure. She didn't want to be obvious about searching around, but it was so interesting here – anyone would be curious. She almost missed the familiar face of one of the scientists standing beneath it.

Suddenly the salmon smell was overwhelming and Rose was back to that night many months ago. Standing over the home-made bomb, horrified onlookers working for the Elites backing away from her in terror. They had worked for years on this project and suddenly Rose had rocked up and destroyed everything. It was a good feeling, being feared. One of those onlookers was now repeating the past actions, mouth open and backing away.

So it seemed GEGMA were repeating the mistakes of the Elites. *Typical.*

“No,” the scientist whispered, and then screamed, “I thought I’d escaped you!”

It all added up. The Starspeak in the advert, so different from the blocky, simple lines used to brand corporate logos across the

stars. She'd paid it no mind: it was what anyone would use to catch the attention of her kind for a job. Gryps were fine, needed minimal briefing or supervision – one Gryp knew what all Gryps knew – but were prone to short-circuiting or plain overbalancing at a crucial point in an assignment. Humans who'd had too many Gryp-related disappointments were, sometimes, foolhardy or desperate enough to make a Community contract.

But how many of the Community wandered the Street, scanning the dome for classifieds? Her people had left the GEGMA decades before, when the rings were still cooling in their orbits. Serendipity had nothing to do with it: the advert had been meant for her. A call for help, from the Community. A call to keep them safe in their own dimension, peaceful and enclosed like so many cargo hold stowaways.

And here she was, and here the scientists were, those few who had stumbled again on the mathematics of interdimensional transport, despite Rose's systematic annihilation of the Elites' records, despite her hunting of the original research teams. There would be few credits for this job, but she could hardly turn it down, and it would keep her busy. Avenging the Community's banishment had been interesting while it lasted, but keeping them safe promised a lifetime of adventure.

Rose smiled, and drew her favourite laser gun •

Bonus Material

Alternate titles:

The Community Calendar

A Single Assassin In Possession of a Good Laser Must Be In Want of a Job

Our Dimension, in the Middle of The Street

Planet of the Salmon

“This turned out surprisingly coherent, and I enjoy how the worldbuilding leaves us with unexpected questions, as any good sci-fi should: why do the hive-mind robots talk in rhyme? Are the GEGMA and the Elites the same people? What’s up with the salmon?” —Danielle Saunders

THE EDITOR wants to know how everybody managed to avoid making any “something smells awfully fishy” puns. Maybe you all just have more self control than me.

MEMORIES OF SAND

Jan Kozuszek, Greg Weir, Emma, Etaash Katiyer, Cerian Craske, Paula, Niko Kristic,
Vlad, Mark Johnson, Carla Plieth

I couldn't believe my turn has actually come. The wind has scattered the storm clouds, and under the clear sky our three

rovers crossed the bridge and sunk their tracks into the fine sand of the desert. I can still see my home – a small white spot among other small white, pink and yellow pastel houses overlooking the bay, with balconies facing the destroyed shore. We sometimes gather – or, gathered – on them to watch the storms, the lightning giving the sky a sickly yellow tint. That close to the barrier and the bridge gate, the wind could reach us, carrying the constant roar of thunder.

But no storm lasted forever, and a new expedition would cross the bridge with their ears still ringing, to look for what the wind had uncovered. The treasures of the other side were much valued, and constituted the only source of income for those living here – them and the occasional tourists from the cities inside the barrier, who wished to see what was left of the old world. But the excitement in their eyes always turned to disappointment as they looked across the bay. No corps-

es. No monsters. No ruins. Just sand, and scorching sun, and the storms that came and went every week.

Except there were ruins, of course. Buried, but the wind could uncover them. Deep in the wasteland where only we dared to go. And it was my turn to try and find them, and rob them of their treasures, so we could live here a little longer. Here, at the edge of the human world.

The rover's juddering halt jolted me out of my reverie. Pierce, from her spot behind the lead rover's sensors, had found us a promising spot, and called a halt. I checked my gear - tool, excavator, emergency anchors, life support, resonance projector, all in perfect order. The same couldn't be said for my nerves, particularly with Hu and Feder waiting on my OK to unseal the door and step out onto the sands.

I expected it to feel different. I knew it wouldn't, of course; without a storm system aggravating the field remnants, there's no real difference between our pleasant little scavenger town and the old world's cadaver. But I expected a jolt of energy, a spark like a static shock; something to mark the occasion.

Instead, I found my feet sinking into sand just like I used to play

in with the other kids. Pierce gave me a moment to find my feet, but I knew better than to hang around.

We lined up for the briefing. Pierce's tool projected a hazy rendering of the building she'd identified, pulsing red marking points of note: "We've got four storeys. Looks like a merchant building. Geophys seems to be showing it pretty choked up with sand still, but there's a nice big central cavity that got cleared out by the storm. One side's badly damaged, so we'll need to keep an eye out for a collapse, but other than that this should be a simple room excavation job. I've got promising responses here and here, but merchants sold all kinds of things that won't show up on a scan, so stay sharp and you might find yourself a bonus."

When he heard the word bonus, Feder shot me a look, a hard, lopsided grin stretching across his lean face, mirroring the red puckered scar above his eyebrow. I'd known Feder forever and I remembered the day he got that scar. We had made the plan together—the two of us would crawl under the rotting lattice of the porch and plot like we owned the world. A couple

of lies, a stolen ID, and an old-fashioned pair of bolt cutters was all it took, and soon he was sitting in the front seat of a crappy Model One rover breathing in the cool air of trepidation and success. But the morning had been too still, the sand had stopped dancing and a smell, heavy and yellow, had draped itself over the area like a pall. The sand clutched at my feet and I stood rooted, unable to walk away and unable to climb into the rover. Disgusted, he'd gone anyway and from the balconies I could see the glint of metal streaking across the horizon, slicing tracks into the dunes, for once perfectly free. Then the winds picked up and suddenly I could see nothing at all.

Feder ended the day an urban legend with a four-inch scar, lucky to be alive, and I ended the day without a friend. Now, his eyes glinted with malice, but I could see the desperation behind it. It was the look of a starving animal backed into a corner, baring its teeth, not sure where the next threat would come from. Everyone knew this was his last chance, that he was one more screw-up away from being kicked out of the program. And then what? If you weren't scavenging, you weren't eating. People did anything to get these jobs. I had to watch my back.

The original structures here were old, far older than what anyone alive today could remember or care about. There were myths about the ancients. They were muttered about in children's tales as the ones who first created the barriers which we now inhabit.

Immensely wiser and stronger than us, their secrets are now lost in time. What remains of them are monolithic structures buried under hundreds of meters of desert sand.

People much like us had once inhabited these places too. Many thousands of years ago, there would have been teeming cities built into every nook and cranny of these artificial caverns. I could always tell apart the old structures from the newer ones. The older had a sense of perfection in them. Some buildings would be falling apart, while others would seem to be exactly as they were when first put down however many years before.

The valuables, however, were harder to uncover. Some trinkets could be buried under heaps of rubble, strewn across the tenements, while others could lie untouched inside sealed vaults behind locked doors. We had plenty of time to forage.

Anything that ever breathed down here has long since shrivelled up and turned to dust hidden in the dark for millennia. Almost all the automata had drained their energy reserves. The few that remain threaten only the least vigilant and most careless of the foragers. Only fools came down here unprepared, to meet a fool's demise.

I was wary of being the first to head into the building – there were far more experienced scavengers than me on this team, as well as people I needed to be wary of. Either I could head in before Feder, and stand a chance of getting something valuable

before him, or I could head in behind him and keep an eye on him so that he wouldn't be able to get rid of me to move up the ranks. It would be just like Feder to "accidentally" injure me and then conveniently place himself as my rescuer. Making my mind up, I shuffled to one side to allow a few people in ahead of me. If I placed myself in the middle of the group, I could keep myself safe while also avoiding missing out.

I don't know what I had expected, but the building was just as decrepit inside as out. There were fragments of furnishings visible, but most of the hallway seemed to have been dyed the same drab colour as the rest of the sand outside. Initially, I thought this would make it easier for me to spot anything metal which could be sold later, but as I spotted a chunk of dull, rusted metal under the sand I realised that nothing here had kept whatever shine or beauty it had once had. We weren't even hunting for anything valuable – we were out here searching for the last remnants of the dregs of society.

I hesitated, listened. A deep silence filled the space. Deeper than the muffled footsteps in the sand, deeper than the grunting of the men aimlessly strolling around the room, shuffling and kicking up sand, their faces half hidden behind makeshift protection against the harsh elements out here. Even the howling wind couldn't drive out the silence. It lay heavy upon the group, and I was sure I wasn't the only one who had noticed. But that wasn't all. It was almost like I could feel

the temperature dropping in the room. Looking up from my feet, I noticed the room had actually fallen silent now. Fear crept in, thick as fog, blinding like a lightning bolt. Five minutes, not more, and something intangible had happened, something I couldn't quite grasp until I finally spotted it. I audibly sucked in air, causing heads to turn in my direction. This wasn't a scavenger hunt, we weren't hunting. We were being hunted now. What I had feared all these years, cumulating in this moment. What I saw was a pair of eyes glinting at us from outside the window. A figure standing perfectly, perfectly, still. And that's how it started.

Someone grabbed my arm. I turned. Feder, his face expressionless. He moved his lips close to my ear, I thought about protesting for a split second, and then realized drawing attention to us was the last thing I wanted. At first I couldn't understand what my old friend, now enemy whispered. He saw my confusion, shook his head, pointed in the direction of the window, and whispered again "Now". It clicked, and we fell into motion, swift, side by side.

Something was wrong. Perhaps I was still skittish about my first mission, or perhaps the sheer electric terror of that place had overwhelmed my judgement. But, without a second thought, I found myself charging forwards. Pierce's sharp cry echoed in my head as I splintered the desiccated sill and hurtled headlong out into the wastes, and it was only when I landed, roughly, in the folds of a simoom-sculpted

dune, that I realised that Feder had not followed. Mortified, I wiped the blood and grit from my vision – the window or my broken visor must have bitten me deep above the eyebrow – and looked up, transfixed, at the groaning hulk of the merchant building. And it was unmistakably *groaning* – not the skirling wind or the shifting sands, but the construction itself...

And I could do nothing but stare numbly as its four storeys crumbled, almost elegantly, before me. Was that Feder? The foragers? Desperately bracing myself, I grappled with my cloak as the aftershock ripped through the cavern in seething floes of scree; debris and shingle raining from above while the very earth buckled and remoulded from below. A crust of sand plastered my bloody face as I clenched my jaw and prayed for dear life; pain, guilt and paralysing fear contending savagely in my breast. My first mission.

At last the chaos subsided and I scrambled from the rubble. My sand-bleared eyes widened at what the aftermath had uncovered – and at the dark figure who had seen it too.

In front of me was a gaping crevice deep into the bedrock. The vast emptiness barely illuminated by the bright sunlight seemed endless. I crawled to the edge feeling vertigo and looking down into cavern filled with the outlines of many structures of a dead city, wholly intact, lost to the world and forgotten for millennia. Mesmerised by the vastness, I suddenly remembered the stranger. Jolting up, I did a quick

survey of my surroundings. Whoever, or whatever I saw was gone. I was completely alone in the desert in front of a giant gaping hole – a doorway into a mysterious world that somehow felt familiar.

Pacing back and forth I went through my options interrupted by an imposing thought: Why on my first mission? The sinking feeling in my stomach gave mixed signals of hunger and the desire to vomit. I knew there was no other choice. No one is coming for us, and there were six hours before the setting sun sealed my doom. The winch on the rover should get me down there but what will I find there, or what will find me? As I strapped the hook to my harness I took a deep breath. And pressed the remote control that started my descent. As I looked up I saw the hooded figure appear as a silhouette in the fading light. Panic made my insides squeeze and flinch. "You are going to need this," she said as she threw a wrapped object into my shaking hands.

I knew that voice. Jana. She had been a scavenger once, but had been kicked out of the program for telling too many tall tales to the children. Filling them with futile hope. Feder and I had been among those children.

I opened my mouth to respond, but it was already too late; the winch had lowered me past the lip of the crevice, and Jana had disappeared back into the shadow of the dunes. I switched my attention to the object in my hands.

Within the thick canvas lay a device which in some respects reminded me of a scavenging tool; the long aerial and small screen wouldn't have looked amiss in any of the settlements along the edge. The rest, though, was ancient. It would fetch a small fortune if I could get it back inside the barrier.

My musings were brought to a stop with a sharp jolt, and it took me a couple of tight breaths to realise that I'd reached the end of the rope, still fifty feet above the ground. I let myself hang there for a long moment, taking in the scene below me and considering the options I had left. As far as I could see I had two; return home having failed, tell the program that Feder and Pierce and Hu and everybody else was dead, and that I'd found a tomb of the ancients but had nothing to show for it; or continue on, take a blind plunge into the hostile unknown below me, with no way back and no-one to lay me to rest.

It never was going to be a diffi-

cult choice. I fired my first emergency anchor into the nearest wall, then pressed the release button on the winch.

Next thing I knew, I was lying on the ground, opening my eyes, only for my eyes to meet another's. The eyes outside the window. The eyes I had realised before were green, not brown like ours. But that can't be. When the last deserted this place, they were exactly that. The last. By leaving, they ceased to be.

I have forgotten how long this place has been declared deserted. But some of us returned. When I arrived it felt like coming home. Initially, the small shelters were only built to house scavengers like us, our predecessors who wanted to explore the world that had been left behind. Nowadays, we have the wealthy ups coming as well, eager to get a glimpse at the long forgotten world. For them, this is a quick getaway; for us, it means survival. Because no one knows what's out there, working in the program is dangerous, likely a suicide mission.

For Feder, me, and the others from the freeze, it's one of the few ways to make a respectable living and we fight to get a job here. Although we've been here for a while, we're still searching for traces of what I've heard some call 'earth'. Nobody thought we'd find anything but ruins, debris, artifacts like the one Jana gave me and that could maybe buy me a way out of the program but that I couldn't care less about at the moment.

"You're human," I whispered.

"Yes."

And for the first time in a long, long while, a smile crossed my lips •

Bonus Material

"I really like the calm-before-the-storm feel created by repeatedly punctuating the action with random reminiscing."—Mark Johnson

THE EDITOR feels awfully sorry for Feder and hopes he is ok.

Cooking by the Book

Bad Wolf, Christian Pfordt, Phoebe Fay, John C, Llewellyn, Leonard Yip,
Yihua, Jacob, Sarah Nolan, Sarah Binney

“Virgin Blood, it says on the recipe.” Moving her finger along the parchment inscribed with curly handwritten letters, she found the corresponding amount for said ingredient. “One lamb-stomachful.” She sighed heavily before putting down the leather-bounded grimoire on the table, making a thud that shook up a mist of ancient dust from the cracks in the heavily worn wood. Why are puddings never simple?

She glanced at the doorway. The night was still young. She'd hate to die too soon before the inevitable Death at midnight, but a waste of life force would be even less desirable. Dying to save a cat was good. Executed for piracy was exciting. Managing to sell herself for vivisection and drawing her last breath precisely at midnight? Felt almost like she had tricked Death itself.

Or maybe she wouldn't even have to die – she had lost twice that amount of blood, and to her disappointment it hadn't killed

her, not even close. But that was another body, another lifetime. Another identity. Another... Her thoughts trailed off to the question that had been vexing her for Wicca knew how long: was each reborn to a parallel world, or was she just jumping through time in different identities, and all this would finally connect and make sense one day? She had never met her other incarnations. Yet.

There was, however, little time for philosophy. The witch, after all, had only one day. She picked one of the clean lamb stomachs and grabbed an obsidian dagger, held it to her left side, and stabbed. Virgin blood flowed freely into the ominous vessel, and she barely had time to pour its content into the cauldron before she crumbled to her feet.

There was midnight, and there was morning — the first day. She was a witch.

Not only the sky was red; the floor was covered in blood, as was her gown, a ferruginous crust all over her left side. Does time pass on when no one's there to measure it? It does, certainly, so she couldn't tell how long she had been unconscious. Not more than a few hours though, as it was only just dawn.

She reached out her hands to grab the table and pulled herself up, only to realize that the cauldron was almost empty. Just a tiny bit of her pudding was left. She couldn't say what exactly had happened after the old wall clock had struck the twelfth hour. The grimoire was still on the table, still on the same page, where it said, “Virgin Blood, one lamb-stomachful”. What could have possibly gone wrong? Nothing; she was sure that she had made no mistakes. And no one knew that she was here to perform the ritual. Maybe she succeeded. But wouldn't it be different then? None of the other deaths before had felt like this.

There couldn't be any doubt: She was still alive, still in the same body. It took her a while, however, to figure out if that was good or bad. Pondering, she stared into the cauldron, when suddenly a scratchy voice behind her gave the answer: “Good. Rather good.”

“Would you stop messing around with my recipes?” She said, turning around.

The grimoire, still lying on the table, chuckled hoarsely, “Your time is up, my dear.”

"There's nothing you can do to stop me from doing this, you know."

"I am stopping you, and I will stop you, and I already have stopped you. That's how this works," said the voice that had once been human. It was a man's voice once but was now neither male or female. It sounded like all the Oracles did. The witch shuddered at the thought that she might become one of them, that she might linger too long in one life and the inevitable Rebirth would catch up with her.

"You cannot keep doing this forever," the grimoire said. "The wild magic you are using is immeasurable, but each body can only use it so much before their spirit is torn up. What are you trying to achieve?" The Oracle knew the answer, of course. It never asked questions it didn't know the answer to.

She could be honest, and say she was terrified of the Rebirth. She remembered when this Oracle changed, screaming as every history, every timeline, pulsed through them. She could be honest, but instead she shrugged:

"Being one person for too long gets dull."

"I have been the same person for an eternity, and the eternity before that, and the eternity after that."

"And you still like the sound of your own voice?" Silence. Ha. That got them.

After a long, lingering pause, the

grimoire responded. "Enough delay. Do you know the reason for my intervention? After countless cycles of death and birth, why have I at last decided to conclude this saga?" For the briefest of moments, she faltered in her nonchalance – but in the beat of a bat's wing she regained her composure.

"Not in the slightest. It is of no importance to me, for you will fail in your pathetic attempt to... thwart me." She stifled a giggle at her use of the word thwart.

Subtly, she began to utter the ancient incantations she had practised over a thousand lifetimes, enunciated with countless different tongues. Her pointed fingernails traversed the metaphysical space around her; piercing into the nooks and crannies of the universe itself, feeling how the wild streams and inlets of magic pool around her extremities; and drawing upon it, feeding on its power, wallowing in its strength.

Suddenly, she threw her arms forwards, crackling her knuckles and yelling as she had done so often before: "*Defenestratus!*"

Sparks radiated from her fingertips, emanating across the table and bouncing off the implements strewn across the table. The colours reflected in the pools of blood, bathing the room in a thick red light. She cackled a deep, resonating laugh.

Then, just as suddenly, they fizzled out, plunging the dungeon into darkness.

Slowly, the grimoire began to laugh. "That was it?"

Nothing. Thick, sluggish silence. The faint apricity of the early day. Tiny spheres of blood, jolted from rest by that ancient arcanum, suspended in the air. The world was motionless and empty and all of a sudden really quite terrifying and there was a sudden inevitable realization that yes, the Oracle possessed far more power than she did and yes, she was probably going to die, not simply Death but the inescapable cessation of being that she had run from again and again and everything she had done, everything she had achieved in her millennia of life trying to borrow and steal and claw her way to more life was worthless, maybe worse than worthless, a cruel parody of actual life, actual meaning and all that was waiting for her at the end of this long road was a small, leather-bound grimoire, its pages more rot than fibre. Time had stopped.

"I have waited a thousand lifetimes for your demise. If the universe had any sense of justice, you would have died the first time you tortured a child." The grimoire had the slightly agitated tone of a wizened professor lecturing a witless child over some egregious repeated mistake, enunciating each syllable with careful rage. "I would have stayed the executioner's axe, heard the clock tick past midnight before it fell, had I the choice. You did not deserve this."

Each breath drawn was a torture, a brutal wrenching of broken

glass into starving lungs, but she managed to push out five words: “It... was... the only... way...”

The grimoire began to unspool. Parchment came undone in the half-light, leather crumbled to dust and settled in the pools of viscera on the floor. Then the animal sound of a low, keening moan; the crack of bones snapping together in all the wrong ways. A figure was rising out of the mound of dust and blood; some un-thing wrapped in paper and flesh, muscles raw and twitching, bare and naked as a flayed body. The murk of the dawn occluded most of its vague man-shape, but its face was unmistakable – firelit, smiling and angelic. The face of a young child.

She reached for her dagger.

The thing had already spanned the distance between them when her hands brushed its handle. It stood there, smiling, even as she screamed and buried the athame up to the hilt where its heart should have been. Some kind of slick wetness sloughed off onto her hands. Their eyes met. It spoke. Still, it was smiling.

“No,” it said, with a voice that was all at once young and old. “Rest now, in your failure.”

“What are you?” she whispered, knowing full well the answer.

Something that passed for low laughter issued from its papyrus lips. “Even at the end, as you were at the beginning. Witless. Spineless. Weeping. Ashamed.”

It leaned in close now. She could see the dark scars down its grey face where her athame had cut into so many lifetimes before. “I was your first. I would not be your last.”

“But you hadn’t answered my question,” the witch pointed out politely. “I asked, *what are you*, and – as far as I had understood; you’ve not been a very clear interlocutor – you merely spewed a string of meaningless and rather rude adjectives back at me, and rounded them off with a couple of perfectly inane remarks. I mean. Whatever did you mean by all of that? I don’t believe you have the faintest idea either.”

“I haven’t,” admitted the papyrus lips sheepishly. “I was sort of making everything up as I go along. I wasn’t very good, was I?”

“No, I’m afraid you weren’t,” the witch agreed. “In fact, I thought you came across as just the slightest bit pretentious. Anyway, I believe we were about to fight to the death, or something. Shall we skip the pointless melodrama and maybe get on with it?”

“Yes, let’s.” The apparition coughed. “Now, let’s see...” It removed the witch’s athame from its chest and winced in dis-taste. “Ew. Icky. Look at all the ichor you made me spill.”

“I had the idea stabbing you in the heart would incapacitate you,” the witch explained in an apologetic voice, “but clearly I was wrong. You appear fine.”

“I am fine.”

“Would you mind terribly handing me my athame back? What the blazes is an athame, anyhow?”

“Exactly. What’s wrong with a plain old dagger, I ask you. *Athame*. My goodness.” The apparition shook its head regretfully. “I daresay I would mind handing you this, er, athame back. You see, you might try to stab me with it again—”

The cricket bat knocked its head clean off.

“I’m glad that ridiculous exchange is over”. She muttered. Unfortunately for her the being didn’t really need its head.

The athame slid in through her dry withered skin. The tip nicked her aorta even as the surging magic within her furiously obliterated the daggers wards. The athame disintegrated.

“One lamb stomachful of Virgin’s blood” said the oracle as it placed a greedy hand in the wound. With every beat of her heart she felt herself weaken. Reaching out to the swirling magic, the currents which drove reality she *pushed*. The ex-grimoire recoiled, its desire only half sated.

The pain was all consuming. The universe shrank and became a room. This pinprick of raw suffering threatened to overwhelm her. Blood sloshed out, pushed relentlessly by a failing heart. Her grip tightened on the rusted iron cauldron luxuriating in the sensa-

tion of that crumbling metal as it grated against her skin. She drew in a ragged breath and exhaled, calmly compressing the pain and restoring at least her thoughts to her.

Her mouth opened, as the air rasped out it lost the form her mind held so clear. Unconsciousness claimed her, the spell unfinished.

"Well that went as expected," said the thing that had been a grimoire. "Let's see if there's any improvement next time."

--

"'Virgin Blood', it says on the recipe." Moving her finger along the parchment inscribed with curly handwritten letters, she found the corresponding amount for said ingredient. "'One lamb-stomachful.'" She sighed heavily before putting down the leather-bound grimoire on the table, making a thud that shook up a mist of ancient dust from the cracks in the heavily worn wood. Why are puddings never simple?

She glanced at the doorway. Then stared, fixated, at the night sky beyond.

Astronomy, Astrology, Cosmology and Cookery were rudimentary elements of a good witch's education. She had not lived countless lifetimes that each flared for a moment's great glory before flickering out to be swallowed by the insatiable darkness that was the fathomless pea soup of eternity without picking up a thing or two.

The night was young, as she'd expected. But the stars, which only now were winking into existence, were not in their right places.

Paying no attention to the low moans that the grimoire was starting to make, she strode over to the fireplace and unhooked the cauldron. The rest of the pudding's ingredients – child's fingers, lost hopes, a goat – fermented at the bottom.

She muttered a few well-chosen words, swilled the pot around widdershins, and looked again. No change. According to the planets as they ought to align, the unappetizing mixture should be a souffle by now.

The grimoire's moans turned into howls. She put her hands over her ears and tried to concentrate. Why was the night sky wrong? Had she somehow slipped into a mirror universe, where everything was as it was, only back to front? Possible, but unlikely. She had never been one for reflectology. Mirror universes were not to be confused with parallel universes, which were a different beast altogether. Her thoughts trailed off to whether each rebirth occurred within a parallel world, or whether she was just jumping through time in different identities.

If she hadn't slipped into another world, why were the stars wrong? Unless...

The howls of the grimoire cut through her hands like an athame through lungs.

"Will you shut up!?" she snapped at the grimoire.

The tome rudely refused to reply, instead continuing to issue a thin wail that pierced the star-bright dusk. It sounded less like a voice and more like air leaving a splintered lung. She grit her teeth and sprinkled a pinch of dormant daydreams into the mixture. Still no souffle. "How long is this going to take?"

The wails seemed to be intensifying. They drilled into her skull, into her ears. Absently she scratched her cheek.

Her fingers came away wet.

"Longer than you've got, iterant."

She spun. The grimoire seemed to leer at her. Abruptly she realised the noise came not from it, but from the very air, from the curse that hung heavy in the space between them –

She lurched for the book at the exact same time as a spasm of pain rippled through her being, sending her sprawling.

"Wha – have you – this is not – how it was su – posed to end!"

She spat and the phlegmy blood that splattered across the page was black as ink. The book remained silent. The Oracle was gone, she realised; the tome was inert. Just a book.

Wet blackness poured from her ears onto the hungry page. Dying, she watched her life-ink coalesce into letters, conglomerate into words, and knew she would

not live to read them. Not this time, at least.

Long minutes passed and the ink dried on the page.

Only the stars gazed with dispassionate interest at what it read:

Hope of progress proved unsound

Still the Stone remains unfound

Iteration once more bound

Better luck next time around

End

Repeat •

Bonus Material

Alternate titles: *The Athame of Death*

"I wrote my part fairly early on in the story and enjoyed reading it turned out. I found it interesting that the grimoire became an malevolent figure. When I decided to make the grimoire talk, I didn't see the characters as evil. I envisioned it more like like an old friend with a dry sense of humour, and multidimensional vision, who was watching the witch experience the same fate

they had. I wanted to watch her become an oracle herself, that was my idea, but it took a fascinating turn that was enjoyable to watch unfold too." - *Phoebe Fay*

THE EDITOR is not hungry any more, thanks.

The Strange Case of the Astrogator's Eye

Kelly Power, Shaun Vickers, Tristan, Harley Jones, picturesquerain, Joe Ross-Biddles, anon, Sam Cocking, anon, Bob the Creator, Andrew Conway

Cecy Carrington feared that she was losing her wits. Day after day she pored over the star charts in the Great Map Room, making notes, making copies, trying to commit each tiny detail to memory. When she attended the evening dances, her mind was filled with spinning constellations. Her old governess would have been horrified by her inattention. This, she would have said, with that nasty, almost-pleased air of vindication she had

always adopted when Cecy ignored her admonitions and got into a scrape as a result, *this* is why nice respectable girls do not belong on starships. They pick up all manner of bad habits.

If it had been Cecy's brother who had passed all the examinations and been offered a spot on one of the Empire's most prestigious starships as an apprentice astrogator, her family would all have been beside themselves with delight. As it was, their praise was decidedly muted. *How very modern!* they said, and *Well, if you are certain that you want to do*

this, Cecilia. Yes. Yes she was.

Except that now it all seemed to be going wrong, and Cecy began to wonder if madness might not be the least terrible option. It had to be, when the alternative was that the stars themselves were waltzing through the heavens, impossibly shifting position – and that the charts aboard the ship were altering to match them.

Then there was the matter of the gentleman with the green cravat. He ought not to have been aboard the ship at all.

The green cravat itself, however, only served as proof that he could do whatever he liked. Green was for military, and the crest emblazoned on it carried the rank of marshal, an incredible position for a man still in his early years: bright-eyed, strong jawline, and not a wrinkle to hide it. He'd even be quite attractive if it wasn't for the permanent smirk lodged above his chin. *Starcruiser Bulwark* was a leading research vessel for systems both local and distant, so this armed presence was alien and uncomfortable.

Focus. Enough daydreaming, and learn your stars for tomorrow's inevitable quiz from James, the ship's *actual* astrogator. Astora Medius' neighbours were... Jeraph Major? 10 astronomical units further from home. Or was it 15? Cecy groaned, and planted her feet as she stood up to put an end to her break - if you could call leaning against the corridor wall outside her bunk-room a break. She'd be better working now so she had time to dance again this weekend. She began to trudge back to her room...

A scream of shearing metal burst down the corridor. Doorways ahead vanished into blackness.

Searing pain clawed at Cecy's shoulder as she collided with the wall, thrown from her feet.

The overhead lights sputtered back into life, and wails echoed faintly from the end of the corridor. Cecy gasped and clutched her arm as she stumbled forwards. She had to reach the bridge. She had to help. Now

was no time to cower and hunt for bandages.

The captain barked into the intercom.

++Adopt Brace Position. Attempting Emergency Lightspeed Manoeuvre.
++

Following the winding route to the bridge, another scream rang out as the wall to right shone out in a flash so bright it was still blinding through her eyelids and she was hurled against the opposite wall. That was the thing about lightspeed jumps, just as bad on the way out as the way in.

Struggling against the urge to throw up, Cecy stumbled down the last few passages to the bridge, blindly groping for the lock of the bulkhead door as her sight slowly, and painfully, returned.

The bridge was disorganised and chaotic even during a well-prepared lightspeed manoeuvre, but now there seemed to be at least a dozen crew shouting at a given time as others ran between control stations, checking and double checking every readout and gauge they could find.

The gentleman in the green cravat was the sole point of stillness, standing firm like a rock in the stormy seas ships used to brave in days gone by, his hands clasped simply behind his back watching the screen.

Surely her sight must still be returning, Cecy thought. That must be it. The screen was black, with none of the stars you'd usually see. It was only when she noticed the chart in the corner that she realised; the screen was

working, but there were no stars for lightyears, not just in front of them, but on the chart as well. She blinked, tried to refocus, but her head was still aching from the lightspeed jump. She slumped against the wall. This was not really happening, surely; surely it was her brain playing tricks on her.

Green cravat turned to her, his attention drawn by her stillness among the hubbub of the bridge. "Carrington, isn't it?" he said, smiling. "James has been telling me about you - he says you show much promise. Come and join me at the helm for a moment." Cecy gathered herself together and approached. The Marshal may be being friendly but one slip could see her dismissed.

"Stand here and tell me what you see in the screen." He gestured as he spoke for her to take his position.

"There's nothing, sir" she answered. "No stars, no visible craft..."

"It certainly seems that way, Carrington."

"There's nothing shown on the chart! Sir, I don't understand -"

"Keep calm" he interrupted, smiling reassuringly. "You've trained for this. Think: where would we have to be for there to be no visible stars?"

Cecy stared at him in astonishment. "A black hole? Or possibly the interior of some large rock planet? But that wouldn't explain the charts -"

Again, he moved to placate her. "Don't worry about the charts! Tremendous Tunes By Accordion • 27

Think – when, in normal operation, are there no stars visible?”

“During a light-speed shift! But that means - “ She was beginning to get irritated by his constant interruptions.

“Yes. I’ve steered us into one of the portions of space that one visits during a light-speed shift.”

Cecy glanced at the screen again. The little chart pulsed in one corner. The rest of it was so dark that it seemed to suck the light out of the room.

“But that means... we are still in the shift-space,” she said. Green cravat cocked his head at her. He smiled.

But Cecy barely noticed. The numbers ran through her head, calculations and equations from those nights under the harsh indoor lighting of the academy.

“This should not happen.” Cecy found herself walking to the console. She touched the interface. The chart rotated.

Still no stars.

“And why is that.” Green cravat stood beside her.

“It’s not possible to stay in shift-space for longer than a few milliseconds,” she muttered.

Green cravat looked her up and down.

“James spoke true about you.” He put a hand on her shoulder. “Now get us out of here,” he said in a low voice.

Cecy stared at him dumbfounded. All her manners went out the window.

“You think -I can deal with this? Do you even know what an as-

trogator does?” Cecy said.

Green cravat stepped closer. She could smell the faint lavender perfume. Expensive organic stuff.

“This is an order. Get us out of here.” And with that the man walked away. His boots clacked against the floor.

“Wait!” Cecy shouted, “where is James?”

So briefly she thought she might have imagined it, the man faltered, the military rhythm of his stride broken – and then he was gone, and the door slid shut behind him with a pneumatic hiss.

Cecy bit back a terribly unlady-like curse, shoved her curiosity about James to the back of her mind, planted her feet and drew a deep breath. Handling the flagrantly impossible was her job.

“Astrogator’s Override, Event Class Thaumiel, Emergency Code Apollyon,” she murmured to the console.

She walked over to the Primary Viewport, placed a hand against it, stared into the impossible blackness and thought.

Reaching lightspeed – it *wasn’t* lightspeed, but that relic of Ancient English had managed to reach the stars – required motion through shiftspace, but even the very best experimental hyperdrives could only sustain a dimensional transfer for a moment. The power cost grew exponentially with time: the energy to stay here for whole *minutes* should have drained dry every star in the sky.

Cecy snatched her hand away

from the viewport. It was *hot*-but- *oh*.

The Marshal couldn’t possibly maintain shiftspace this long. But if you had clearance to override the safety locks, if you didn’t mind burning out the heat-dispersion systems and bending the laws of physics in a circle, you could set the ship’s Anti-Time-Dilation Relativistic Shielding to stretch a tiny instant out to... hours?

Millennia?

And that – trapped behind the sky, in a pocket of splintering time – *that* was when Cecy saw something moving outside the viewport.

There being at last a star was of some comfort. The Astrogator towering among the stellar flares in which it basked was not. Its Eye opened as the ship drifted closer, concentric ring after concentric ring of ambpal and topazlazuli around a comparatively tiny pupil. It yawned, slowly, albeit with a viscerally independent reptilian grace.

The shockwaves nearly tore the ship apart. Sicklehead sharks swarmed in threes around the bases of its colossal ivories the size of volcanoes. Then Its Mother reared Her head.

“Untameable, they are” said Green Cravat. “Indomitable. Some say they are far smarter than us. And yet they have no form of language. They will do us no harm, however. At least not purposefully. We are here to continue my census of them. My last three promotions were for explaining how some of our capships had suddenly disappeared

without contact near the Red Planet, Marx, in the Astoria Mediūs system. Anything which can take out a capship 500 times faster than the Galactomilitary can IS a matter for the Galactomilitary... One of our missing vessels turned up in this Nexus, and reported that one idiot Captain had set course right into a maw, upon which two other idiot Captains opened fire on the Astrogator, resulting in various ships being shredded and their own being sucked into the Nexus. This does of course mean that the current mission's evaluations shall be cleassinfieored..."

Cecy shuddered at the thought of the consequent astrobureaucratic squalor. To a greater extent that she had shuddered at the faux pas of having asked this man whether he knew about astrogators: the professionals. Which of course sound exactly the same as Astrogators: the supposedly fictional terrors in old governesses' tales.

Sadly, there was little time to consider the metaphysical connotations raised by the realisation that "fictional" terrors could, in fact, turn out to be quite real. Cecy did wonder momentarily what this meant for Spacemermaids – after all, she had been so sure that she had heard that alluring voice the last time she had passed through the Sirenuse Nebula. Her mind had a habit of returning to that voice anyway, sometimes at highly unhelpful times, so it would be reassuring if it had a basis in reality.

Perhaps to push that voice from her head, Cecy returned her fo-

cus to Green Cravat. He finished punching in a sequence on a control panel, before raising his gaze to the viewscreen. Following it, Cecy watched as probes set off from the ship, carrying between them what appeared to be an oversized GPS tag. The probes moved into position alongside the Astrogator's tail, skilfully attaching the tag while its attention was fixed on their ship.

Green Cravat returned to Cecy's side as the probes finished their work. "This will allow us to continue tracking the Astrogators from outside shift-space. We'll receive population and health data, everything the census requires, but on top of that we'll be able to plot their course through shift-space itself. If we can figure out how they can exist stably within it, then perhaps one day our ships will be able to as well."

"But for now, Carrington, remember that we cannot. And get us out of shift-space... *now*."

Cecy turned her attention back to the controls. Fixing the Time – Dilation Shielding equipment should be relatively simple, especially if her suspicions were correct and it had not been broken but merely bypassed by Green Cravat. It took her a few moments to find the relevant connections, which was ample time for her to wonder why *she* was the one doing this – surely Green Cravat must have been the one to sabotage the ship, he must know the simplest fix... she'd just come to the conclusion that he must delight in the power of giving orders when she

finished connecting up the wiring and stood up so she could return power to the system... which did nothing. The stars were still out, and now the Astrogator looked to be moving with an almost undeniable purpose.

"Carrington, we need to leave NOW." Cravat said, seeming increasingly agitated.

"We should be gone sir, I don't understand why the equipment isn't working."

"Maybe James was wrong about you after all," he muttered, shouldering Cecy aside to look at the panel, which did indeed seem to be working. They were apparently experiencing time at a perfectly normal rate.

"Cut off all power to the shift drives," he shouted to the room, which had quietened somewhat since the initial chaos. Cecy could see that the Astrogator had turned directly towards them now, and its slit of a mouth was yawning terrifyingly wide.

"How will that help?" cried Cecy, "we need the shift drives on to get ourselves back out shiftspace." Cravat ignored her and turned instead to look inquisitively at the monstrosity about to engulf them. As the shift drives were cut off the rest of the ship became oddly quiet, perhaps the quietest it had ever been in Cecy's time aboard.

"It's the only hunch I've got, maybe the reason all our ships go missing is because these creatures sense the distortion that we make to shift space when we arrive." For a second his iron visage had cracked and Cecy caught

sight of a very scared man who was way in over his head.

Cecy decided that she had had enough, rage and frustration bristled up under her skin. “So you sabotage our ship to send us here, and all you’ve got to save us is a hunch?” She cried, the words slipping out before she could stop them. Her eyes widened with panic, an outburst like that against a superior officer could get her court marshalled.

But to her surprise he responded calmly, almost with a hint of desperation in his voice. “I chose this ship because I’ve read your records, by the time you graduated the academy you understood shift space better than most astrogators.”

Cecy spun away from him. *Think. How does something survive in space? Normal matter can't survive there.* Unless. She spun back to him, “The astrogator is made of shift-space.”

His eyes widened as all the puzzle pieces started to slot together. “Can we convert the shift drive to function as a disruptor beam?”

“Send the Astrogator into realspace? Only little bits of it and only briefly.” Cecy said. “The

Sparke-Wobblingly equations are symmetrical in the real line and the j-quaternion, so matter is stable in realspace and meta-matter is stable in shiftspace. We assumed there was no meta-matter in shiftspace due to the same asymmetry that means realspace is full of matter and not antimatter. That’s wrong. There are pools of metamatter in shiftspace and they’re inhabited. Close to a pool of metamatter the space transition is stable, so we are stuck here.” Cecy was already planning the paper she would publish if they got out of this mess.

“No time for gobbledegook, get us out of this mess.”

“We just need to get about 50,000 astronomical units from the metastar.”

“We can’t do that on the ships engines.”

“Then we’re just going to have to drive the star off instead.” Cecy reached into the control interface, started the shift engines, and adjusted the shift field into a long spike aimed at the largest Astrogator’s eye. She applied a surge of power, enough to take a cubic kilometre of plasma into realspace for five milli-

seconds. The Astogator blinked. She tried again. The Astrogator blinked twice, then there was a puff of something from the corner of its eye. A third time, and the Astrogator flipped around, braced its forelegs against the metastar and began to swim away with sweeping strokes of its massive tail. *What is it swimming in?* thought Cecy and her imagined paper grew another three chapters.

The metastar dwindled rapidly into the distance, and the ship dropped back into realspace with the sound of a breaking garbage compactor, surrounded by a cloud of crystals. Cecy looked at the spectrograph. “Mostly water, with a little sodium chloride,” she said. “Crocodile tears.” •

Bonus Material

Fun fact: the only thing connecting everyone on this chain was an interest in period drama, which is why I was surprised it turned into Not Quite Star Trek. But that’s chainwriting for you...

THE EDITOR is awfully confused about what an astrogator is and is looking to finding out sometime.

Spell Trek

Alastair Haig, Lara Welch, anon, Danielle Saunders, Joanna Choules, Greg Dimmock,
Pharydah, Maya, puntxi, Samuel Cook

It started as a tingling underneath Omiles' fingernails; thaumions of power begging for his attention. His face broke into a slight grin as he felt the arcane forces flow up his arms and into his soul. He had the power. He WAS the power. He was going to enjoy this.

The hull of the *Wing of Stars* screamed and protested as its metal ruptured along carefully sealed lines, bending and twisting at Omiles' command. With a casual gesture of one hand the flow of air from the split was halted, and reversed, pulling detritus from the cold vacuum back inside the ship. A waft of a pinky moved the throttle, catapulting Omiles' pod towards and into the hole, slipping through with ease.

Omiles uttered a word the pod halted mid-vacu- no, wait, mid-air (Omiles making a minute adjustment to his spell and swearing as the pod scraped a wall) and softly touched down to the floor. Two Dilithium wands ejected themselves from the console and clattered to the floor. Omiles snatched one and drew a sigil in the air, using the other hand to close his entry port. Speaking loudly to drown out the demons in the comm-dimension he'd opened, Omiles

gave his mission report, pausing every now and again to let the bridge ask the questions he was already answering. Only then did he relax and allow the grin to fully take over his face.

In the corner an ensign held tight to their safety harness and looked sadly at the space where their bagel had until recently been, deciding if that was enough to say something. "Y-you know we have airlocks and communicators now right sir? You don't need to j-jettison the bay everytime you come in?"

Muttering a response and making a specific gesture in the direction of the ensign, Chief Brian Omiles exited the Shuttlebay and headed for his office in Ops.

Omiles spent much of his on base time in his office, and as such it was fit to his every specification. The room was to remain sparse, clean, and more than anything, private. On his desk sat two items: one, a communicator with permissions too high to be taken from the room, and two, a holographic projector that could conjure any combination of Solomonic seals should he wish to engage in ritual.

The communicator started buzzing almost the second Omiles entered his office. News spread fast around here, even without

magic.

"Chief Omiles here." He leaned against his desk to press the 'speak' button.

"Brian!" came the exuberant reply. The general always leaned in too close to the communicator when he talked, and Omiles wrinkled his nose at the static. "Glad to see that your mission went well!"

"Yes. I'll get a full report in soon."

There was a brief silence that made Omiles hope in spite of experience that the general would let him go with just that.

"Nothing fun out there today? No gossip for the base? You know everyone's dying to hear about that meteor you're exploring. I've barely been able to keep the research squad off your back!"

Beyond an almost intolerable chattiness, Omiles acknowledged that the general knew what he was doing, damn him. If other people were trying to get on the project, that spelled bad things for Omiles. After all, he hadn't made his newly acquired powers a secret, and if they found out what he'd done to get it – not

only would his advantage over the others grasping for his job be gone, but his suddenly flourishing career could become nothing but space dust.

"Just the same old meteor – she's got rocks, and lots of 'em," Omiles grated out.

*

"Given that we've not been assigned a mission together before, Introductions are due" undersaid the larboardmost, yawning to expose *Warsprite* imprinted on Her Redoutable Side.

"And Icebreaker Games" chipped in Next-In-Line, corotating to proclaim Herself *Enrapture*.

"Ooo, how exciting, do let's play 'I spy'" exclamgested a third, all-a-pitching to reveal *Dreadnightfall* across Her Mighty Prow.

"But Introductions first" nononsensebrusquiasserted another, counterrolling to bring *Bark Loyally* to bear. "Reflects what I require of My crew..."

"Hear-Hear-HEAR" crescendoapproved *Holdfast*, *Countrattan* and *Coldly Unkind* synchroyawing into view. "Which--Is--How OUR--Squad-ron IM-po-ses OR -der--on those--who've--been DE-FEA-TED" they proclaimed smugnanimously, Three-as-One.

"But let's play 'I spy'!" enthusingasterjected *Enrapture*. "I spy, with My little eye, something beginning with 'I'!"

"Interstellar dust!" effervesciebullolated *Dreadnightfall*, pointing aft.

"Actually, I'm *Hooded*" said what had until now passed for a little dust cloud, affording a small smile before smoothlyrechamele-onireconfiguringballisticexodeck concealedprecocious. "But go on..."

Two moons set and another rose over the Aichemess-Spacefleet. The Captains and Admirals were playing cards in their own smaller Icebreaker amidships on *Warsprite*. In hindsight, some rued having chosen "Animal Snap", given the presence of Viceadmiral Francesca Duck, of the 'Unkind, whose Exploits-Past, as Spacesailors'-Yarns, had Long-Preceded her arrival.

"...beginning with 'M'!"

"Meteor!" groancluded *Bark Loyally*. "I spy... No, wait, I hear, with My little ear, something beginning with P..."

"Pre-E-EY !" intoned Three-as-One, honing in and broadcasting:

"Just the same old meteor – she's got rocks, and lots of 'em," a voice grated out.

"Ah, you don't say," replied another, distorted like the first through the fluctuatingflittering-faltering wedged-open interdimensional cracks. "Say, is someone else there on your end? I'm hearing some background chatter on this call..."

*

Omiles waved a lazy hand through the chalked-in sigil on his desk, and the communicator's insistent buzzing cut-out. Chalk was old-school, but more permanent than dilithium plasma

wands, and it seemed to annoy the demons less than the dry-wipe markers.

Incredible, he thought. A week ago he'd have been faffing about with some fail-safe encumbered single-demon message carrier, standard issue. Comm speeds between base and starships on those were milliseconds instead of hours with pre-thaum tech, but the demon tended to forget the odd crucial word and substitute mind-bendingly inappropriate ones. Plus, their hold music was the *worst*.

A week ago, he had landed on the Crowley meteor for the first time, and understood that everything could be so much easier...

And before this last mission, well. Changes had been made, his communicator for one, although he refused to let any other technician look into the workings that connected it to *Wing of Stars'* new comms grid. But he knew before this mission that there was power out there, scientific achievements no-one but Omiles would be able to replicate, something more than just some admittedly-risky short-range comms dimensions.

And he'd been right. Instant shuttle docking. Near perfect comms over the light-years. Here at a stroke of chalk, gone at the swipe of a hand.

Of course, it would have been more procedurally correct to carry out the sealing ritual on the communication dimension, but that way lay "health and safety" and "docking via the airlocks instead of turning the shuttle bay into a vacuum, please, Chief, I

just wanted to eat my sandwich".
Boring nonsense.

The chatter in the background of his comms was random noise from the portal. Nothing more.

So why hadn't it stopped when he'd erased the sigl?

Omiles' anticipation had brought him to his feet, to pitch stiffly from heel to toe and back while scanning contemplatively, unfocusedly, into the middle distance, but on noticing the still-hotness of comms he held steady, and yawned back about to face the desk again. The noise seemed to resolve, barely to the edge of intelligibility.

"Well then it's their turn to pick a letter for 'I Spy'!"

"But *who* is 'they'? The manifest is all accounted for... *Hooded*, another one of yours?"

"There are no others like *me*." A tone of invisishimmeringinsouciance, Omiles thought, without ever having heard that word before.

"Then I suppose A Further Introduction is needed. If we cannot see you, then at least your name?"

Omiles stewed in the dead air for a few moments before admitting to himself that no-one else was going to answer.

"Chief Omiles."

"Already?" The reply was immediate. "I had heard the rumours that an *Omiles* was being laid down, but to be launched and commissioned so soon?

"I—sup-pose YOU'RE—be-ing kept—out—of SIGHT—un-til HE'S—fin-ished ex-plor-ing

CROW-ley—yes?"

"Probably you were brought to Honour his Achievements once his work is complete?" A volley of agreement from a collection of *things* that, Omiles knew perfectly well, *did not talk*. He tried to clear his throat but there was no blockage to vent.

"No, that's... I wasn't... I *am* him." He braced for denial, incomprehension, questions that he would have liked the answers to himself.

Dead air suffocated him.

Omiles had never heard silence quite this loud. He stopped pacing and gazed round his well-kept office. He knew every inch of this room, every word on every page of every book that adorned the shelves surrounding him. Nothing was out of place. But for the first time in his life, this hawkish ability to see every perfectly composed detail, only confirmed that he knew nothing about the situation he now found himself in. His eyes fell upon the stick of chalk. One end was sharp and smooth, while the other was worn and uneven.

"I spy, with My little eyes," the voices came as if bubbled through every nerve in Omiles' body. He began to sweat as a painful cacophony of voices erupted.

"You're Chief Omiles?"

"Something beginning with..."

"When?"

"I-saw-him-so-on-it-will-hap-pen"

"Something beginning with..."

"You're not meant to be..."

"Something beginning with..."

"The n - o t - n o w - m a y - b e - s o o o o o o o n - n o - C r o w - l e y - when-then-at-he-must-goooooo-backkk-no-to-crow..."

"Able to hear..."

"Something beginning with..."

"Us yet!"

"Something beginning with..."

"You-kno-w-what-you-must-did - p u r - s u e - i n - e n d - i n g - isthebeginning-correct"

"Crowley?" panted Omiles, more out of desperation than certainty. Omiles spotted a small heap of powder on his desk. Through old eyes he saw the hands of a younger man.

"Only there will you be able to correct..."

"Cor-rect-make-righ-tttt-sol-ve!"

"Something beginning with, Pl!."

"Prey!" shouted Omiles as if he had done so before. "Prey! Prey! Prey! Prey!"

Omiles found himself lying flat on his office floor. He could only feel the engine's soft hum and the embrace of silence. Suddenly, his intercom buzzed. He slowly got to his feet and pressed the receiver. "Chief Omiles, your expedition pod is ready and its course to Crowley has been calculated." fuzzed Lucy's voice.

Omiles paused and then picked up the pristine stick of chalk from his desk. But Lucy knew what time it was, so she let him be, "I'll get back to you later Sir".

Omiles reached for his desk for his scheduled post-noon power

nap. Just like clockwork, whilst sat on his ergonomic desk chair, he opened his drawer to retrieve his custom made memory foam pillow, crossed his leg atop his desk and began to drift off. But only this time, he wasn't transported into the usual bliss of nothingness but haunted by the deal he brokered to get his powers. It was supposed to be a simple trade of his grandmother's mansion to recharge his powers for it had begun to weaken as he aged and if the general found out, he would not be allowed on the mission. But as he spoke to the demon through his blanket of shame and reluctance, the demon fixated on the gem on his hat. He was somewhat perplexed as the demon began to slowly approach him almost like it – no he – was drawn to him. Omiles in turn began to retreat.

"What do you want?" he hissed. This was of course a rhetorical question coming from most men, since lesser demons were incapable of independent speech, but Omiles was not most men. In the demon's hand gestures, he read the alarming suggestion that the demon was here to collect on the bargain.

"But the mansion was "accidentally" burned to the ground last week! And yes, I know the plumbing is shite, but I how does that matter for beings with an internal body temperature of 1000K? It's not like those lead pipes can take any fluid that might be of use to them... What do you mean, look at the small print?"

Omiles dived for the pocket dimension which contained his

copy of the infernal contract. He had more difficulty than usual reaching it from the additional layer of distance caused by his dream state, which didn't help his mounting nervousness at the way the demon moved towards him, unhurriedly, knowing its prey could not back any further into the quicksilver filing cabinets that lined the dingy, rust-coloured office cubicle it spent its 9-to-5 in.

Contract retrieved, he paged through its thin parchment pages. As can happen in times of crisis, his rebellious brain spared a moment to wonder what the world was coming to if even the bureaucracies of hell slashed their stationery budgets to the extent that you could barely touch a document without destroying it, but his subconscious mind skimread the crabbed print nevertheless.

And this time Omiles noticed there was no date specified in the contract, so the contract was eternal. The contract came into existence since the very beginning, the beginning of everything else, and the beginning of the power taking shape.

"Gosh, how long have you existed? And what were you before? Why are you here?" Just when Omiles shouted out these questions with expected silence in return, an idea suddenly flashed into his mind, "Oh, perhaps... Could it be the case... that that's what you want...?"

"To find out answers to these questions...?...! And these questions were not mine... but yours?"

Omiles found it hard to distinguish "I" and "you". As for a long time they have been working as one mind.

"But how could you not know the answers already... With your knowledge of everything in existence?" Omiles continued reading the document. "Oh here! You seem to have once made an agreement shortly after the beginning... To pursue the desire for eternal existence, eternal curiosity and eternal knowledge, you just have to make a small, negligible sacrifice, a sacrifice which will cause no inconvenience but great conveniences, and cause no pains but a relief of great pains."

"You have agreed to erase the memory of what you were before! Permanently! Permanently is defined by the direction of the time arrow of this universe!"

The demon nodded its head.

"Right, so can I assume that you still don't know the answers to those questions?" asked Omiles. The demon waggled its head and made a rude gesture, expressing succinctly how stupid a question that was, because why else would it be here?

"And can you accept that I clearly have as little idea as you?" continued Omiles. The demon shrugged its shoulders in a way that conveyed how, whilst it was generally sympathetic to this viewpoint, it was in no way its problem and that it wasn't the one who was liable to spend the rest of eternity as Satan's favourite footstool for breaking the contract.

"So I suppose I'm going to have

to reverse the direction of the arrow of time, so that my past hasn't happened yet and therefore I can remember it, because it will be in front of me?" hazarded Omiles. The demon gave him a big grin and a thumbs-up, as if he were a particularly talented performing monkey.

"Sort of now-ish rather than, say, in a century or two?" The demon nodded vigorously.

"Well, here goes...." said Omiles as he drew a very complex sigil in the air.

For a second, his entire formerly-past-now-future life flashed before his eyes in a torrent of images. Then the spell collapsed and normality re-asserted itself.

Through the fog that was already clouding his newly-acquired memories, Omiles remembered

one important name.

'Prometheus. I am Prometheus. And I will kill every eagle in existence.' •

Bonus Material

Alternate titles:

A Day in the Life of Chief Brian Omiles

Rocks, and lots of 'em

With Wings made of Stars

Wracking Up Omiles

Forward To The Past

Guess Who?

The End Of The Aquiline

What's The Frequency, Brian?

Interference

Radio Gaga

Who am I?

The Demon Contractor

Literally anything other than Spell Trek

"Ah, the answer to the ultimate question in life: 'What if Miles O'Brien was a Warlock?'.

The Magical Star Trek AU you never knew you needed. Or wanted. And probably still don't.

Pleasant to see some demons/ships/whatever those were, though I'm surprised none of them were called Bertie..." — Alastair Haig

"Finishing off this chain was really hard, because none of it makes any sense or bears any relationship to any other part of it. Chainwriting at its scatter-brained finest!"—Samuel Cook

THE EDITOR enjoyed that hugely and come up with a concise and witty comment to go here the moment she's figured out what the heck just happened.

THE MUMMY

from Differing Viewpoints

Samuel Cook

After CUSFS's triumphal viewing of the classic horror-action-comedy-two-fingers-up-to-Egyptology, The Mummy, I thought it would be amusing to summarise the story from some different viewpoints. This may not make any sense if you weren't there at the time.

Two Cows

You have two cows, but one is really a bull, and tries to get frisky with your other cow. You kill both and mummify them. You now have no cows. 3000 years later, some Americans turn up looking for some beef, so you inadvisably resurrect the bull as a demonic entity that proceeds to go on a killing spree in order to resurrect the cow and rule the world. This fails. You still have no cows, but have at least learned a valuable lesson about the perils of necromancy.

Roger Hargreaves

Mr Juicy was having a bad day. He'd been having a nice sleep for 3000 years, but then got woken up by some annoying people. Then he remembered that he ought to find Little Miss Mummy, so that they could rule the world together as invincible demonic beings. So he went down to the shops. On the way, he met Mr American. Mr Juicy doesn't like Mr American, so he juiced him, and felt a lot better. Then he met the Other Mr American and juiced him too. The day was really looking up for Mr Juicy. He had so much juice now! A little bit more and he'd be able to give Little Miss Mummy a big juicy present.

He met Mr American's two brothers and juiced them for good measure too. He was just feeling so juicy! So he headed over to Little Miss Mummy's house, but just as he was about to give her his big juicy present, the annoying people that woke him up turned up and chased him away. He was so upset, he had to go back to sleep for ages.

Imhotep



dQr.wy w | r mnXt tn | sDr

I am most fruity in comparison to this linen garment. O lying down at night!

Or, in the vernacular:

I'm too juicy for this shirt. Oh, bugger!

Cultist of Imhotep



Aldi Gothic

Danielle Saunders

The hummus has been taken. There is no sign that it was ever here.

Last week this shelf had flatbreads. This week it has rolls. The flatbreads have been fought back to a lower shelf, where they now plot their revenge.

The label claims that lemon juice and lime juice are on this shelf. You have never seen lime juice, but there are certainly two kinds of juice. You do not touch the other one.

A packet of salami nestles amongst the watermelons. You are unsure whether it is only you who can discern its true form, or whether you too are being fooled. You walk on.

We are now opening till 3. A store assistant is required at till 3. We are now closing till 3.

It is May. The central aisle is selling knitwear.

It is August. The central aisle is selling knitwear.

It is January. The central aisle is selling ornamental fountains.

It is 4pm on a Saturday. The eggs are all gone,

save for one untouched carton in the centre of the shelves. You give it a wide berth.

The seasonal carrot mascot now has a parsnip antagonist. You shudder when you think of their secret vegetable wars, rooted in hatred.

It is 10pm on a Thursday, and there are six of you queued for the only open till. Five of you are buying a carton of milk, a chocolate-based snack, and a loose citrus fruit. The sixth, who has chosen to purchase only sliced bread, looks around in increasing panic.

You think you see lurpak, and then look again. You see norpak. You see noperak. You see lorpak. You see blodpakt. You buy the norpak.

Till 9 is open. There is no assistant. There is no queue. There is a single turnip on the conveyer. There is no-one else in sight. There is no-one else in the store.

We are now opening till 2. We are now closing till 2. A store assistant is required at till 2. An exorcist is required at till 2. A cleaner is required at till 2. The blood, oh god the blood.

Xenomusicology:

the use of fictional ethnomusicology in the multi-media world of James Cameron's *Avatar*

Cici Carey-Stuart

The following is an extract from a dissertation submitted to the Faculty of Music in 2018.

Abstract

This paper examines the use of fictional xenomusicology in James Cameron's *Avatar*. Xenomusicology is the study of possible extraterrestrial musical cultures (see Robert Freitas Xenology, www.xenology.info). Within *Avatar*'s multi-media world, the paper analyses: how xenomusicology is constructed; how xenomusicology constructs the alien Other; and what this creation of xenomusicology shows about our real-world society. The paper focuses on the 'research' of James Cameron's fictional xenomusicologists on the (fictional) musical culture of the Na'vi, the alien protagonists of *Avatar*, as portrayed through: the film; the DS and PC games; and the official Pandorapedia website. The fictional xenomusicological methods from Pandorapedia are used to analyse the music heard in *Avatar*, and to see how music 'makes real' Na'vi culture. I argue that the xenomusicological research about Na'vi music played a fundamental role in the creation of the alien Other. However, the restrictions placed upon it by Cameron's blockbuster vision made the xenomusicology uncomfortably reminiscent of the cultural Darwinism of early comparative musicology.

Introduction

James Cameron's *Avatar* (2009) set twenty-seven box office records and still holds the world record for the highest-grossing film (*Avatar 2009, Box Office Mojo*, n.d.), thanks to years of planning the hyper-realistic alien planet of Pandora. The musical life of the Na'vi aliens played an important role in the construction of a realistic Na'vi world and culture. Throughout the film, Na'vi music produces an immersive illusion of a whole new culture, and the diegetic (in-universe) music deeply influenced the whole soundtrack of the film. Cameron and James Horner, the composer, worked with a consultant ethnomusicologist, Wanda Bryant. They created an entire alien musical culture and *xenomusicological* (the study of alien musics) research based on this constructed music. The invention of xenomusicology, and of fictional *xenomusicologists*, reaches a previously uncharted depth in film-universe formulation. In this essay, I examine the construction of this fictionalised ethnomusicology both in the film itself and its multi-media counterparts. Ultimately, I will argue that xenomusicological research about Na'vi music plays a fundamental role in the creation of the alien Other in the world of *Avatar*. However, I contend that the film is uncomfortably reminiscent of an older type of thinking about music and culture, one still rooted in the colonialist ideas of social Darwinism (Rice, 2014, p.17). *Avatar*'s xenomusicological basis in real-world comparative musical techniques (from the late nineteenth- and early twentieth-centuries) reminds us of the historical foundations of ethnomusicology, that today's scholars have had to come to terms with.

The discipline of xenomusicology was not originally created for *Avatar*: in fact, it is not fictional at all. It developed as a sub-branch of the area of study known as *xenology*, "the scientific study of all aspects of extraterrestrial life, intelligence, and civilization" (Freitas, 1979). Xenology has been used since the 1950s to define the study of the possibilities of extraterrestrial life – none of it is fictional, but it is all highly theoretical. Xenomusicology is an area of study within xenology, focussing on the possibilities of alien music making, balanced precariously on the "liminal boundary between legitimate academic inquiry and fantasy" (Sandzer-Bell, 2016). Soon, of course, it found its way into science-fiction, with examples such as the self-proclaimed Klingon xenomusicologist Jon Sil-

payamanant (2011) and a fan-written xenomusicology module from Starfleet Academy (LiveJournal, 2010) as part of the expanded universe based on the main *Star Trek* plots.

The plot of the *Avatar* film follows Jake Sully, a paraplegic marine, who controls a human-Na'vi hybrid *Avatar* through a neural link. His original mission is to force the Na'vi to let humans exploit Pandora's natural resources, but as he learns more about the planet and its native inhabitants, he chooses the Na'vi and Pandora over humanity and helps defeat the human invasion. The video games are set before the film: in the DS game (Ubisoft, 2009a), the player character* is a young Na'vi who stops human scientists from disrupting the ecosystem, with the help of a sympathetic Avatar. In the PC game (Ubisoft, 2009b), the player character has an Avatar, and decides to either secure a crucial ecological site for the human forces or help the Na'vi protect the site. Both games contain diegetic and non-diegetic music, and Na'vi musical culture is key to the game plots. The final piece of media considered in this essay is the official field guide, *Pandorapedia* (n.d.). All of the information about Pandora created by Cameron and his consultants is published in this guide, as though written by real researchers working on Pandora. Everything in the guide is presented as fact, including entirely fictional xenomusicological research that would not seem out of place in academic journals in the field of ethnomusicology.

A small number of scholars have already focused attention on the *Avatar* franchise, leading to many opposing interpretations. As Bron Taylor remarks, "The film-maker and film have been labelled pro-civilization and anti-civilization, pro-science and anti-science [...] racist and anti-racist" (Taylor, 2013, p. 6). Chris Klassen, for example, contradicts the praise surrounding the film, calling it a "thinly veiled misogynistic plot tied to a romanticisation of indigeneity" (Klassen, 2013, p. 143). This appears to be in direct opposition to Cameron's ideological vision of encouraging us to see the connections between all human beings (as quoted in Taylor, 2013, p. 5). From a musical perspective, both views (the more critical and the more utopian) are valid – there are also differing opinions of the use of real-world ethnomusicology in the film.

Michael MacDonald, discussing the soundworld of the film, accuses Bryant and Horner of contradicting Cameron's inclusive ideology by appropriating sound samples from real-world musical cultures as inspiration for Na'vi music. He compares Horner to the film's antagonist, saying that he "mines and then processes 'indigenous' music" (MacDonald, 2013, pp. 264-265) to create the film score. In a contrasting paper, Trang Nguyen focuses on the use of these sampled sounds in creating "saturation scoring", filling every scene in the film, which creates the emotional aspect of Cameron's visual spectacle (Nguyen, 2013, p. 10). Bryant herself wrote an article in *Ethnomusicology Review* (2012) discussing her role in *Avatar*'s world-building process. She emphasises how important Cameron made music to the Na'vi culture, to the point of naming the main clan after a mythical "Blue Flute" – and hiring a consultant ethnomusicologist. Bryant found unusual or largely unknown sound samples from many musical cultures, from which Cameron shortlisted the sounds most appropriate to the film. Bryant and Horner then created the Na'vi musical style from a "global mash-up" (Bryant, 2012) of these musical ideas. As well as coming up with the actual sounds, Bryant also created Na'vi musical concepts and behaviours (Rice, 2014, p. 22) and give the music a (fictitious) cultural background. In order to get more information on *Avatar*'s xenomusicology, I contacted Bryant myself. We communicated via email, and I am grateful to have heard her views on the different scholarly attitudes towards the music, as well the difficulties of including ethnomusicology in a blockbuster film.

This essay contributes to the scholarship on *Avatar* by focussing specifically on the fictional xenomusicology within the universe of Pandora. It investigates how this overlooked aspect of world-building impacts the film and its related media, through both aural music and the creation or emphasis of certain aspects of Na'vi culture. I will explore how the fictional discipline of xenomusicology is established in the multi-media world of *Avatar* and how it is used to construct the alien Na'vi culture. Finally, I discuss how the use of xenomusicology highlights the continued prevalence of colonialism in our real-world society. The music and musical culture of *Avatar* is so important to the overall impact of the franchise on audience members, I find it surprising that there has been little research into it. Rice mentions Bryant's work when discussing how ethnomusicology is being used outside of academia, but he seems to misunderstand a key point of Bryant's article of 2012: he says that Horner took the sound samples Bryant collected and "mashed them up into largely unrecognizable synthesized combinations" (Rice, 2014, pp. 118-119).

MacDonald, in the most high-profile article on the subject, bases his main argument on this misconception, claim-

* The player character is normally called an 'avatar', but is henceforth called a player character to avoid confusion.

ing that the “electronically manipulated” (MacDonald, 2013, p. 265) versions of the samples were included in the final soundtrack. Bryant and Horner in fact used the samples as inspiration for entirely new compositions; Bryant described Horner’s compositional process as:

an artist looking at a piece of Harry Winston jewelry for inspiration and then creating a piece of jewelry of his own design. The jeweler did not buy or steal the Harry Winston piece, melt some parts of it down, rearrange the gemstones, and call it his own work. (Bryant, email communication, January 25, 2018).

There are legitimate concerns about the use of xenomusicology in *Avatar*, but there are also many positives in the eventual audience reception of Na’vi music, and MacDonald’s erroneous argument attempts to push these under the radar. Overall, this essay will present the faults of *Avatar*’s xenomusicology as a warning about the restrictions on academic creativity in Hollywood. However, I argue that (even with these limitations) the success of the film’s ideological message shows that ethnomusicology can thrive in such an environment.

Construction of Xenomusicology in Avatar

The majority of Bryant’s work as a consultant ethnomusicologist concerned the creation of original Na’vi music, but as a whole musical culture rather than just as a selection of sounds. Only one complete song by Bryant and Horner remained in the film, a Funeral Song (Bryant, 2012). To explain the musical concepts not explicitly discussed on-screen, Bryant wrote research articles on the cultural origins of Na’vi musical sounds and behaviours, as though written by fictional xenomusicologists. *Avatar* is constructed across many mediums that give different possibilities, and limitations, for the depiction of xenomusicology. In the film, the human compound on Pandora (‘Hell’s Gate’) is populated with generic researchers and scientists, few of whom are explicitly given a specific research discipline. Xenomusicology is important only as a background for the immersive diegetic Na’vi music, as also heard in the DS and PC games. In the DS game’s musical sub-plot available on newer systems, the player character learns the “old warrior’s song”. This banquet praise song (*Social Songs, Pandorapedia*, n.d.), is taught by another Na’vi through an ‘emic’ transmission process*. As controllers of the character, we learn about Na’vi culture in the same way as the fictional Avatars, hence the etymological link to video games. In the PC game, the player character is an Avatar who learns about ritual music from the *Tsahik* of the local tribe. This spiritual leader is an informant, teaching the outsider in their ‘emic’ way. Xenomusicology is only explicitly named in the fictional research presented in the *Pandorapedia*, although this is also the only medium where we cannot hear any music. The website describes xenomusicological ‘methods’ similar to Blacking’s use of expanded versions of emic concepts about music (Nettl, 2005, p. 105). A xenomusicologist character is even named: Dr. Wendy Bryan (*Warning Drum, Pandorapedia*, n.d.), after Dr. Wanda Bryant.

Perhaps in an attempt to cement the validity of this fictional discipline, xenomusicology on the planet Pandora is based on real-life ethnomusicological methods. On the *Pandorapedia*, there are linguistic studies of song lyrics, some of which seem intended to be used to measure the “wordiness” of a song, as one of Lomax’s cantometric variables (Cook, 1992, p.200). *Xenolinguists* also discuss theories that some Na’vi songs use vocables that are derived from old Na’vi words, as recognised by Na’vi elders (*Personal Songs, Pandorapedia*, n.d.). In general, the Na’vi have a sophisticated musical vocabulary for a non-literate culture (*Language and History, Pandorapedia*, n.d.); the language makes important musical distinctions, such as between a generic musical instrument (‘otxang), an aerophone (*pawlk*) and a chordophone (*i’en*) (Miller, 2018).

The *Pandorapedia* also includes descriptive analytical articles on different parts of Na’vi music. Many of these articles are on individual instruments, discussing the playing method, their use in Na’vi society and a description of the instrument itself. The descriptions usually make “culture-to-culture” comparisons to instruments from Earth cultures, which, as Rice argues with regards to real-world ethnomusicological research (Rice, 2014, p. 20), can be quite an ethnocentric method of analysis. Instruments are also classified by the means of producing sound, using the Hornbostel-Sachs system, but without further levels of classification – although some instrument descriptions

* The fictional nature of *Avatar*’s xenomusicological research leads to etymological complications around the emic-etic interface. I use ‘emic’ to mean a Na’vi musical view, and ‘etic’ to mean a human xenomusicologist’s view. Because both views are fictional, they can each be seen in the other, much like Nettl’s point that real-life informants can express both views (2005, p. 229).

would fit well into such a system: “Pendulum drum: large gourd with both ends cut off. Drum heads (one side only) made from sturmbeest bladders” (*Pendulum drum, Pandorapedia*, n.d.).

The xenomusicologists also made pitch-graphs, illustrating the melodic contour of songs because Na’vi have no set pitches or interval sizes (*Na’vi Music Theory, Pandorapedia*, n.d.). Here, the researchers drew on old analytical tools from comparative musicology, such as Ellis’ logarithmic cent scale (as described in Rice, 2014, pp. 18-19), which allowed the researchers to define the ‘octaves’ commonly used in Na’vi songs, as they are very different from the Western ratio-based scales.

Alongside descriptive articles, there are socio-cultural analyses written as though based on fictional ethnographic research, mainly focussing on the links between particular tasks and song types. For example, the most complex weaving songs can only be sung by a weaver who is experienced enough to have a very steady weaving rhythm (*Hometree Songs, Pandorapedia*, n.d.). Children are taught how to complete such tasks using simplified versions of adult songs (*Children’s Songs, Pandorapedia*, n.d.), similarly to Blacking’s findings about Venda children’s songs (Nettl, 2005, p. 105). Interestingly, the section on social songs claims that there is no social role of ‘composer’; instead, anyone can compose a song. This appears to contradict the distinction between *pamtseotu* (musician) and *pamtseongopyu* (composer; literally music *pamtseo* creator *ngopyu*); this could parallel a lack of musical hierarchy such as found in the real-life Kaluli people (Feld, 1984, p. 390), and indicate that, for the Na’vi, you become a composer as soon as you compose a song.

As opposed to the social musical concepts, all of the analytical musical theory proposed in the *Pandorapedia* is ‘etic’, as the Na’vi do not analyse their own music. An interesting ethical issue comes out of this, which the xenomusicologists mention but do not expand upon:

There has been no confirmation of musical theories by the Na’vi themselves [...] they do not recognize any theoretical basis other than Eywa [...] An Earth-style musicological analysis would make absolutely no sense to them, and they believe the study of music to be a waste of time. (*Na’vi Musical Theory, Pandorapedia*, n.d.).

This apparent lack of interest in the Na’vi’s own views on music fits with the standard academic position of the 1950s that the emic view was an “exotic curiosity” (Nettl, 2005, p. 229). This link is further emphasised in the use of many comparative and early-ethnomusicological methods in the xenomusicological research. For example, the pitch-graph notation is a similar technique to the melodic contour charts used by Mervyn McLean to analyse the differences between Maori song types in 1966 (as quoted in Cook, 1992, p. 195). The Hornbostel-Sachs system for describing instruments is older still, from around 1910 (Nettl, 2005, p. 383), and Ellis’ cent system dates from at the latest 1885 (Rice, 2014, p. 18). Modern ethnomusicology has mainly left these structuralist methods behind, although they are still used when in conjunction with emic musical views (Nettl, 2005, p. 229).

To counter the largely ‘etic’ exploration of Na’vi music, MacDonald suggests that Horner could have been more “anthropologically sensitive” by developing an “ecomusicological imagination” (MacDonald, 2013, p. 265), such as acoustemology (“a way of knowing that occurs through sound and music” (p. 263)). Strangely, although she did not use the precise term, it seems clear acoustemology was what Bryant was working with when she created the xenomusicological research and the musical theory behind it. Stephen Feld, who coined the term *acoustemology*, described it as the “tacit knowledge” of ecological sounds leading to “active ecoacoustic knowing” (Feld, 2012, p. xxvii). MacDonald says the interrelations between the Na’vi and the environment should be the inspiration for their “musical emergence” (2013, p. 267), and indeed, this is what Bryant intended. Had she not had to make the Na’vi music appeal to the average American movie-goer, she told me that “My vision would have been for a musical culture that reflected the close connection between the Na’vi and all living things on the moon of Pandora, through Eywa.” (email communication, January 25, 2018). Although she was limited in what musical experimentation she could perform, such active ecoacoustic knowledge is shown frequently throughout the *Avatar* franchise. For example, there is a xenomusicological theory that the Na’vi have no concept of fixed musical pitches because drums made around different trees each produce unique pitches (*Na’vi Musical Theory, Pandorapedia*, n.d.). Rather than ignoring newer methods such as acoustemology, it seems that Bryant has used such approaches alongside the older structuralist methods to construct xenomusicology as an entirely new discipline, dealing with not only a different culture, but a different species altogether.

Xenomusicology, Indigenous Culture and the Colonial Mentality

Xenomusicology is used in the multi-media world of *Avatar* to inspire and create music as a fast way of showing an entire indigenous culture to the audience. Unlike other types of cultural heritage, music can be presented alongside other parts of a story, such as the hunt song that is heard in the film with Jake's first flight on an *ikran*. The lack of easily recognisable music (for the average audience member) indicates that the music is alien, or at least newly created. Even through its disembodied use as part of the soundtrack rather than showing the Na'vi singing, the fact that the Na'vi have music to go with the specific ritual that Jake is completing implies that they have music for every ritual, and through extrapolation that music is an important part of Na'vi culture. Often audience members will not consciously register the soundtrack, but subliminally they will be more willing to accept the Na'vi as a 'real' culture with their music playing in the background. The film and games present their culture as a way of directing our sympathies towards the Na'vi, which is vital for the plot of each medium.

When diegetic music is both aural and visual, it becomes especially obvious. The main goal of the PC game is to find a set of songs that will lead the way to a Tree of Voices, and so music is key to any player's enjoyment of the game. In the DS game, the musical subplot is only available if played on later DS systems with cameras – as a returning player on a newer system, I was excited to have a new subplot to play out, especially through music. In the film the diegetic musical moments are very emotionally charged: a funeral chant as the Na'vi mourn; and two different prayer scenes – one successful, one not. As well as being the most obvious cultural practice in the film and games, music is a very important part of Na'vi culture, thanks to its symbolic and practical representation of the interconnectedness of Ewya and Pandora. This is particularly clear to the subset of dedicated fans who read the *Pandorapedia*, in which some of the most detailed articles are focussed on music.

Xenomusicology enables Na'vi culture to be quickly shown through the use of diegetic and non-diegetic Na'vi music. Culture is particularly emphasised as a way of underpinning Cameron's ecological message throughout the film: "to see everything that is connected, all human beings to each other, and us to the Earth" (Cameron as quoted in Taylor, 2013, p. 5). He used a fictional planet to encourage the audience to prioritise the real natural environment. For Bron Taylor, this reflects the growing social and political power of ecological spiritualities in the early 2000s (2013, p. 4). MacDonald (2013) brings up the possibility of such an ecologically-centred acoustemology for the Na'vi, although he does not seem to realise that this was precisely what was being shown on-screen in scenes such as Grace's ritual. However, he brings up an important criticism about Bryant's use of music samples from indigenous peoples. Even though Bryant and Horner only used them as inspiration for new compositions, MacDonald argues that this approach is focussed on "how it sounds" (MacDonald, 2013, p. 273), rather than how the music is used by its creators. Considering the real-life cultures behind the musics that inspired Horner could have led to a more sensitive interpretation of Na'vi culture as a whole.

The differing views on the use of ethnomusicology and musics are representative of wider critical reactions to *Avatar*, and the academic dichotomies between *Avatar* as politically progressive or regressive. Such opposite arguments seem to arise from a tension created by Cameron's desire to promote an ecological message through the necessarily limited lens of a blockbuster production. Reaching that compromise in the film and games reveals an enduring legacy of Western colonialism within mass-media, which finally leads to the conflicting messages perceived by audience and critics, as discussed above. Klassen claims that this legacy means that the final impact of the film runs counter to Cameron's supposed message (Klassen, 2013, p. 143). She argues that the Na'vi are portrayed as the "ecological noble savage", an indigenous people who revere nature and live sustainably. Even though the entire point of the Na'vi culture is to prompt consideration of real indigenous populations, *Avatar* doesn't consider their real political issues in the twenty-first century. Instead it promotes the myth of modern indigenous populations as static, sustainable and simplistic, (Klasson, 2013, p. 153) such as is seen in the lack of an indigenous Na'vi musical analysis system.

This primitivism can be found quite easily within the soundtracks for film and games. I argue that Timothy Taylor's discussion of musical exoticism in advertising (2007) maps very closely onto *Avatar*. He describes the new "world music style" (Taylor, 2007, p. 13) created for advertisements, which is not based on any real indigenous music. Taylor describes how songs like *Adiemus* (Jenkins, 1995) were inspired by sound samples to create a world music that references all of the non-Western world, but not a singular place. This world music style is quite standardised: fe-

male voices singing vocables; drums and flutes accompaniment; and the use of sequences (Taylor, 2007, p.185). I argue that these descriptions perfectly match the *Avatar* soundworld, with the lack of lyrics to most vocal music that is always accompanied by drums and often flutes, even though the film is entirely unique in its use of ethnomusicology to construct this sound. To create a musical culture that produces music so similar to the world music style, the ethnomusicological process must have been considerably ethnocentric. Indeed, it does not seem that it could have been otherwise to creating a new, technologically primitive culture that would not alienate a mainstream audience. However, the xenomusicology on the *Pandorapedia* was based on early musicological methods that could easily lead to such ethnocentrism, but this was not required to create a blockbuster film score. The published reality of *Avatar*, then, is an interpretation of Cameron's ecological message fraught with ethical issues necessitated to a greater or lesser degree by Hollywood's mass-media appeal.

The spectrum between ethnocentrism and ethnomusicology is also seen in the spectrum from diegetic to non-diegetic music, in the soundtracks to the film and games (composed by Horner, Inon Zur (DS) and Chance Thomas (PC))* . Diegetic music, shown on-screen, is always Na'vi music, as inspired by Bryant's ethnomusicology and discussed above. Some non-diegetic music is also Na'vi music, such as the song in *Jake's First Flight*. Other non-diegetic music is inspired by the Na'vi musical style, or at least it appears to be. *Sky Creeks* in the DS game includes drumming rhythms heard in diegetic and non-diegetic music across all three soundtracks and features Na'vi singing. It also includes significant emphasis on high melodic flutes, which are not part of the Na'vi soundworld but are a symptom of Timothy Taylor's world music style (2007, p. 13). Finally, there are parts of the non-diegetic score that come straight from the standard Western orchestral film-score style. The interaction between the Na'vi and Western elements of the score are determined by the presence of humans or Na'vi; for example, *Fight* in the PC game (where the Na'vi player character encounters hostile humans) is in the Western orchestral film style. All three composers use a broad, world music style expression of Na'vi music in most non-diegetic music, so as not to alienate audiences. Horner lamented that he had to be quite aurally conservative, so as not to undermine Cameron's radical visual elements - "it still has to appeal to a film audience in a conventional way" (as quoted in Bryant, 2012). In a personal communication, Bryant told me what she would have done with the Na'vi musical culture had she not had to meet the expectations of Cameron and the average American cinema audience:

I envisioned less of a highly structured taxonomy and a more organic, fluid expression of music [...] I envisioned music that grew from the shared experiences that are stored within Eywa and accessible to all Na'vi through their biological connection to her and all living things on the moon (Bryant, email communication, January 25, 2018).

Bryant was particularly confused by Cameron's conception of music as segregated between genders, as seen in the separation of men's (microtonal) and women's (heterophonic) musical styles. Bryant found this contradictory, as all the cultural roles of Na'vi were shown to be open to both men and women – even the role of clan leader is gender neutral, as the leader of the "Ikran people of the Eastern Sea" (Cameron, 2009) is a woman. "But," Bryant told me, "it was Cameron's vision" (Bryant, email communication, January 25, 2018). It seems that Cameron imagined music as culture (Merriam, as quoted in Myers, 1993, p. 7), within the general Na'vi culture, that presented its own gender roles. A real-life society in which a musical culture presents its own gender roles is that of the Kaluli: men and women are alike in performing most actions, but wailing is "quintessentially female", and singing "quintessentially male" (Feld, 1984, p. 264). The Kaluli are also like the Na'vi, as MacDonald points out, in that they cannot be discussed as separate from their environment (2013, p. 269), and the musical egalitarianism shared by both cultures as discussed. Cameron's treatment of Na'vi gender roles in music can easily be seen as reminiscent of the Kaluli.

A part of Cameron's vision that was especially difficult to realise was Na'vi ritual music. Bryant and Horner attempted to use a microtonal drone, but the idea was "shot down instantly" (Bryant, email communication, January 25, 2018) for straying too far from the musical mainstream. Cameron wanted a simplistic, unison song, which eventually became the "Amazing Grace" music discussed above [*in the full version of this dissertation*], and microtonal drones were relegated to off-screen social songs (*Social Songs*, *Pandorapedia*, n.d.). Microtonalism was completely

* Bryant was not involved with the games, and Horner only worked with the game composers on parts of their scores. Thomas said that he took Horner's "timbre" (Linder, 2009), and he was inspired by Horner's heterophony for the singing scenes discussed above [*in the full version of this dissertation*]. In Zur's score there are explicit quotations such as the bass melody from *You Don't Dream in Cryo* (film soundtrack, Horner) in *Hometree* (DS game soundtrack, Zur).

removed from the *Pandorapedia* article on ritual music, which instead describes this type of music as “the simplest of Na’vi songs” (*Ritual Music, Pandorapedia*, n.d.). Microtonality only survived in the film in the non-diegetic soundtrack to particularly sorrowful scenes, such as *Shutting Down Grace’s Lab* and *The Destruction of Hometree*. Although it is unlikely that such features would be noticed by most of the audience, many fans name these as their favourite tracks, citing heartfelt emotions. In a forum poll of fans’ favourite “songs”, they came first after tracks that had lyrics or were from singing scenes. Microtonality could well have contributed towards this popularity, by subconsciously linking the unfamiliar (‘alien’) musical sounds to the plight of the Na’vi. One fan even said that the tracks “make me cry with sadness i feel more Na’vi than human” (*Favorite Song From The Avatar Soundtrack, Lean Na’vi Community*, 2010)*.

Emotional investment in the Na’vi people was the goal of the entire *Avatar* franchise, so that through that investment the audiences would start caring more for their own species and planet. Horner, Zur and Thomas’ scores made such a subjective connection to fictional aliens possible and this success could not have been achieved without the foundation of ethnomusicological research. The xenomusicology backing up every moment of Na’vi music made the whole culture hyper-realistic, thanks to the acoustemological creation of the music culture. This was registered subconsciously by cinematic audiences, as seen most clearly in the microtonal music, but consciously for gamers and readers of *Pandorapedia*. However, parts of the musical world of *Avatar* perpetuated the film’s use of a ‘noble savage’ ideology. Even though Bryant stressed that she used samples as inspiration for a new musical style, the use of comparative musicological techniques and musics without cultural context lead to a soundworld very similar to that of Timothy Taylor’s world music style. This style was emphasised by Cameron’s restriction of (xeno-) musical creativity to ensure box-office compatibility – yet by making such a blockbuster, Cameron managed to communicate his ecological message to the largest cinema audience of any film (Holtmeier, 2013, p. 91)†. Through their sympathy for the Na’vi, the audience was consciously or subconsciously encouraged to respect real-world peoples and our own environment. Even with its basis in an ethnomusicology with partial faults and limitations, the xenomusicology was what consciously and sub-consciously gave the audience a culture with which to sympathise.

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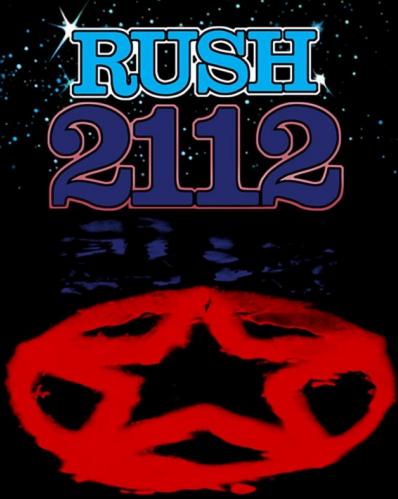
* Forum topic by Zefanaya (username) accessible at <https://forum.learnnavi.org/official-soundtrack-music/favorite-song-from-the-avatar-soundtrack/msg188584/#msg188584> Quote by [Zefanaya](#).

† For examples of the real-world impact on audiences, and their actions in response to *Avatar*, see Holtmeier, 2013.

A Beginner's Guide to Prog Rock Concept Albums Which Tell Science Fiction and/or Fantasy Stories

Sarah Binney

Sounds awfully specific? There's a rich and long-lived tradition of telling elaborate and fantastical stories through the medium of European men with very long hair playing long guitar solos. Progressive rock and metal are to Beethoven what Brandon Sanderson is to Leo Tolstoy, and while I'll admit you do need a certain taste in order to enjoy these, they more than make up for in fun what they lack in highbrow credentials. Here are some classics.



Rush: 2112 (1976)

If you've read Ready Player One, you'll know that when it comes to sci-fi concept album epics, Rush are where it all started. **2112** tells of one man's crusade against the totalitarian, theocratic Priests of Syrinx, armed only with the forbidden, ancient power of Music. It's told with characteristic brevity, wit and humour—oh, who am I kidding, it's 20 minutes long. Hammy, but then all the best things are.

If you like the idea but it's all a bit too 70s then try ... Dream Theater's **The Astonishing** (2016), whose plot and music are heavily influenced by **2112**, but the whole thing's infused with all the pomp and comically convoluted interpersonal drama of a Mozart opera.

Seventh Wonder: The Great Escape (2010)

No relation to the Steve McQueen film. I honestly can't express how great this 30 minute track is. Sweeping instrumentation and fab vocals, superbly diverse and engrossing. The story: the great spaceship Aniara leaves a dying Earth with thousands of refugee passengers seeking a better life, but soon calamity strikes. Fun fact: it's based on an epic poem by Nobel Prize-winning Swedish writer Harry Martinson; English translations are hard to come by but there's one in the UL if you fancy a read.

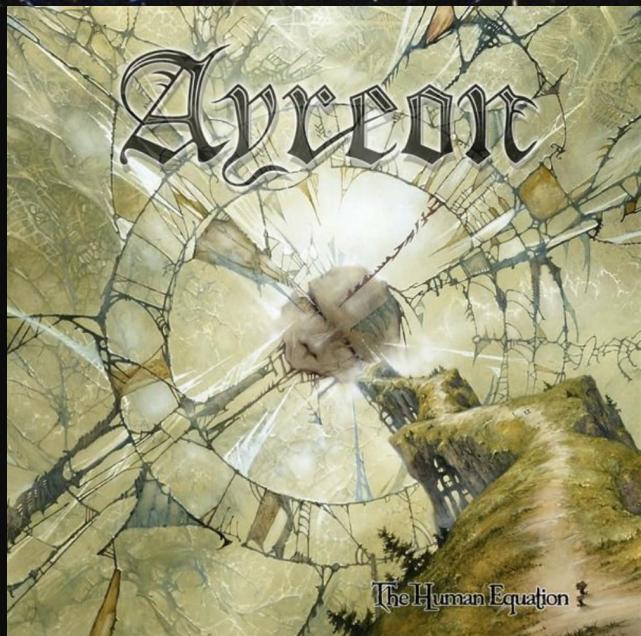
If you've only got time for one track, then try... the Overture: witness the miraculous engines of the Aniara fire up for the first - and last - time.



Ayreon: The Human Equation (2006)

Ayreon is the pet project of an eccentric Dutch multi-instrumentalist by the name of Arjen Anthony Lucassen, whose extreme nerd credentials (this is a man who wrote not one but two albums' worth of songs about his favourite SF movies and TV shows) are matched only by his prolificity. Each of Ayreon's 9 albums to date tells a different chapter of one time-travelling universe-spanning saga, though the individual stories range from Arthurian court drama (*The Final Experiment*) to flamboyant space opera (*The Universal Migrator*). In *The Human Equation*, comparatively the most normal of the list, a man in a coma is confronted by his own emotions (personified by a full cast of guest singers pilfered from other bands) as he tries to piece together the chain of events that led to his situation.

If you've only got time for one track, try ... Day 11: Love. It's a romp.



Persefone: Core (2006)

As far as I can tell, Persefone have two claims to fame: first, that they comprise approximately 72% of the population of Andorra, which otherwise exists only on some maps and Sporcle quizzes; second, that they produce really classy death metal with a broad range of influences including Japanese folk music and Mayan mythology. *Core* (pronounced kor-ray), Ancient Greek for "maiden", is another name for Persephone, and this album retells her journey through the Underworld, contrasting heavy passages representing death with lighter instrumentals representing life and light. (Also, the extended edition has a Star Wars medley as a bonus track, if you're into that sort of thing.*)

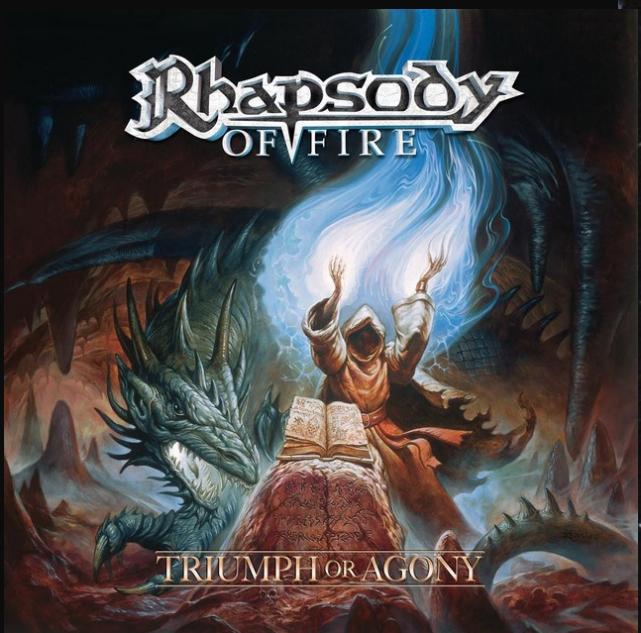
*If you like the idea but it's all a bit screamo then try ... Symphony X's *The Odyssey*, which is a much more Disney-esque version of*

retelling Greek myths through the medium of metal, and I defy you to get to the ending without screaming "CHAMPION OF ITH-A-CAAAAA!" at your bedroom wall.

Rhapsody of Fire: Triumph or Agony (2006)

Imagine your D&D group decides to write some music based on your adventures, but instead of producing one song you end up writing twelve full-length albums, and instead of CompSci Gary doing the voice of the evil wizard, it's Christopher Lee. Any of Rhapsody's albums are equally reasonable places to join the saga, but *Triumph or Agony* is particularly enjoyable for featuring one of the few Italian-language songs in the saga (the rest are all in English), and also because it makes Lee read lines like "The gates were built with the severed limbs of humans and elves", which he does as only Saruman can: completely deadpan.

Not convinced, but you like the idea of Christopher Lee's metal career?... Well, you COULD go and google "The Bloody Verdict of Verden", but I don't accept any responsibility if you do.



* Oh, that's right, you're reading the CUSFS magazine. Of course you are.

TTBA Titles Being Appraised

Anonymous

1) Two tentacled bunnies amble
under a sky of silk,
a neon rainbow
and woollen clouds

The princess saw the silky sky and thought to themself:

I wonder why the caterpillar is eating all the stars
and not my wife's philosophical marshmallows.

To which the marshmallows replied
"because the pleistocene porters promised us a pillow pie!"

"Lucy in the Sky with Diamonds" said one.
"Lyanna in the ToJ with Rubies" upterjected another.
"Elbereth Gilthoniel among the stars wearing Silmarils" breathed
a third.

[Nobody can top that: Game Over!]

2) "Troublesome Tribbles Behaving Academically..."

"Prior to the loooooooooooooong holidays,
in which they went to sea in a pea-green
sieve and ate their curds and vinegar
and wrapped their feet in brown paper"
said the spider to the cockle-shells

"No, Bubblesome Bibbles Behooving bovine-epidemically..."
Posterior to the *short* wallowdays, in which
hippopotami went to the river in a wanderlust of wallwernaria
and ate their purloined pies

and dried their feet on a rapidly-browning newspaper stand" said
the liger to the codicil.

"Stop playing the whispers game" moaned Sheila to her Dog.

3) Trouble Tiptoeing? Become Airborne!

"Double Dipping? Recrumb Delicatessen!"

Said the Fox in Socks, so as to hex and perplex the rabbit-chicken
hybrids

as they headlessly but not earlessly endeavoured to burrow their
way across the road.

"Agh, my hat changed my nose again. Seuss, I do not want a

bespoke Vivaldi-style nostril, I told you I wanted to find a /
Stradivarius/"

insisted Agamemnon the Cockroach, all a-waving an unem-
ployed bow.

Enter Mr Colepterson, arching his prodigious and horned Mono-
brow of Propriety.

"While -some- of you might find this amusing, I'm sure his Lord-
ship wouldn't approve..."

he grumperjected, as the Partakers of Frivolity dispersed into the
night.

4) Two tentacled bunnies amble

diagonally through the mist-muffins
in search of Pastures Greeeeeeen.

They are a Mother and Child,
and this is the Little-One's First-Time So-Far From-Home.

5) Techno-Tortoises Become Actors...

Placid People Become Props.

And Robotic Rhubarbs Become Re-enactors.

Playing Hippopotamus-Headed Hofficers of the Helleventh Hal-
abama.

6) Tanker Tows Britain Away...

In Protest Against Plate Tectonics.

But actually also in accord with prevailing oil markets.

7) Time Travelling Beaver Astronauts

Very little of what is found in space is what is expected to be
found,

and very little of that has any right to be there.

These are acceptedand irrefutable facts. However, what most
people don't know

is that the same can be said for time. It is possible to find a qupurple
analyser in the 11th century,
or a phone with a stretchy spiral cord in the 48th.

The mess that is outer (and indeed inner) space can be attributed
to a

great number of people and organisations,
but the mismatch of items scattered across time have one main
source: the Time Travelling Beaver Astronauts.

Featuring Brett "the Brawn" Bucktoothson,

Bobby "Backwards Chronology" Bountybrook
and Belladonna "the Brains" Belvoir.

In cinemas near you from... whenever, really. It's being released in all ages that have had cinemas, while cinemas themselves are being released in all other ages...

8) They Took Back Antares!

Antares is ours! Or it should be, by any rights.

We bought it, we own it. But those silly little locals took it back!

Well, they won't get the better of us this time.

This time we have a plan, a plan to rival all plans that were ever planned before.

This time we will succeed. What is it they say? Five-hundred-and-seventy-third time lucky? We'll show them who's boss.

We'll show them a tiny band of Brave and Honourable people can never beat a Corporation.

We'll make them regret that they took back Antares (again)!

And so it went on and on and on.

The Lizardmen of Antares IV unseated the Alligatorwomen from 'Posteriors'^* IV, only to have the rug pulled out from under their own scaled hindlegs and counterweight tails,

confining them back to the swampy hinterlands.

^* Alligatorwomen's alternative history's name for the homeland.

Eventually a large spaceship of a more advanced civilization's making placed itself into Posteriocentric orbit (the Alligatorwomen being 'in power' at that point).

A Rotund Bearded Man with a Cat soon Appeared before the Alligatorwomen's Liberation Front Leader, Santalia of the Knife-edged-Teeth.

"I will give you an otherworldly species of warcodlile to ride at the Antaerean Capital that no Lizardman can withstand... in exchange for 20% of your planet's resources" he offered,

as his Cat purritonely fuzzcordioned across his ample lap.

"Sure" she agreed, with a macroserratomaxillarodontic-rictussmile and a tokenlacrima of authentication...

9) The Terrible Threat of the Bionic Aardvark

It was quiet, and still, and early enough that colours had yet to remember how to be more than grey-scale.

Not everything was right with the world, but the things that were wrong were put on hold, allowed some breathing space.

The simple noise of fluttering leaves and humming streetlamps sounded like life shuffling in its sleep.

It was the perfect moment for something modestly amazing to happen. Or something straightforwardly terrible.

Two suns rose over Ant-ares III, alias the hiveworld planet.

Its diminutive inhabitants were cheerily chirping about their daily affairs of bliss.

Ant-isocial gatherings abounded, and several films by quentin tarantino had left the colonies' cinemas packed to the rafters with adoring ant-fans watching

"the hateful eight-legged creature" and

"once upon an anthill in hollywood".

Aye.

Hollywood.

As in the termite-run movie studios.

But if we described this matter too long, it would bore you to death.

Literally.

10) Trouble Tiptoeing? Become Airborne! ...

Trouble Tipping? Become Air!

Trouble Weaving Air?

Travel to Tremalking!

The Wheel of Cheese turns, and Sage-Derbies curdle and pasteurize, leaving fromagiverous mammalian lactic products that become quesadilla-legends. Which fade to Monterrey-jack myth,

and even Monterrey-jack myth is long fruited-stilton-forgotten when the

Sage-Derby that gave it birth curdles again.

In onesuch Sage-Derby, called the Three-Year-Mature Sage-Derby by some, a Sage-Derby yet to curdle, a Sage-Derby long past its best-by-date, a fromageoderous wind rose in the great agricultural-industrial complex called Brie-de-la-Creme's Wood-Smoked Seasoning Refinerie. The wind was not the Brie-ginning. There are neither brie-ginnings nor most-mature cheeses to the churning of the Wheel of Cheese. But it was a Brie-ginning.

The Remaining Pieces of Part I of Die Zauberkarotte

Completing the previous TTBA (2018)'s Account

I. "The Cawsaken" Aria

II. "The Paddledabbleshine Empress-Goddess Pineapple-Duck of the Night's" Aria

III. (Finale) "The Pogostick-Bearded Peoples" Aria

The Cawsaken

7/8ths-Rhage, Alto

Picasso, Tenor

Orc-estra

Pa - pa - pa - - pa - pa - pa - pa - Pain!

Redacta papapapapapapa -

Pa - pa - pa - paints on - ly in Red! Redacta papapapapapapa -

censored.

Redacta-ta-ta-ta - ta - da

Redacta - papagena

Redacta-ta-ta-ta-da

Redacta - papage

Redacta - Dex-ter-ter

no

Redacta - Da-tek-Tar

Pa-pa-Pa-PAH-PAH-PIIE-I-EIE !

Pa-pa-Pa-PAH-PAH-PAH-PAARRGH



F Major The Paddledabbleshine Empress-GoddessPineapple-Duck of the Night's Aria

Sopranatid Quack, quack, quack quieerk! Qua - quarra - quarra - quarra - Gentle. Qui -
(Duck Soprano)



Pintail Philharmonic
Armestra

8 quirri - quirri - quirri-quirra-Noble. Qua - quarra-quarra - Safe; Pin -



fails for My Fleet.

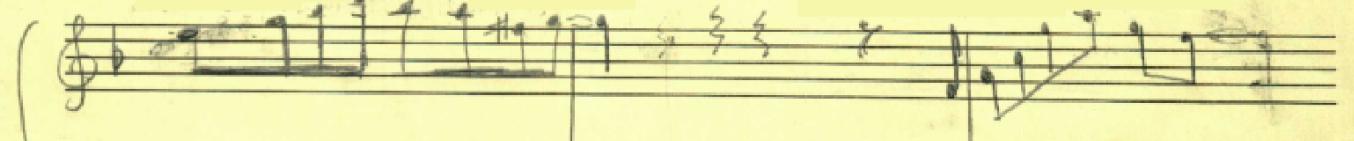
Wad-gimentling Past on their webbed feet.

Wood -



pa - nelled Dae-na-Cthae-Gump Meet!

Write us chains to be concrete ...



With

Quirriquipui-quipuiquipuiquipuiquipui - quir-ie-ie-ie-ie-ie-eek
tr

the Spoone of Office in my Beak,

I stand for the Downtrodden and

the Meek Downtrodden-and-the-Meek E - e - very week.

F# Major

Soprano
(Duck Soprano)

Toy Xylophone

qua qua qua qua quarra
qui qui qui qui quir-----ri
--- 8 ---

... For that's what I Do - o Pineappamulet of protection ... from all worldly affliction

through talking Science Fiction quackananaubercornucopia

pinacolada of af - fec -tion

[Cut to the Barbarian, bedecked with a Reporting Microphone, as the Brass Band Fanfares the Contestants as they (somewhat boblastically) Line Up at the Starting Line...]

PogoStickBearded Peoples' Aria in C Major

Special-Effects-Bass

Barbarian: "Live for Amyrlin Duck TV from King's Parade... and clarifying that the prize is no Shredded Curtain Prune..."

but a *Rag Blind Date* with Ms. Chronophage, Replendant Left in Gold... and - They're --OFF!"

BOING, boing, boing boing! Bong, boing, boing boing!

Acce - lera - boingy

BOOING BOOING Ta - da!

Bo-boing Bo-boing Boingety...

[Cut to Mergansocopter Camera
Over the Leading Pack]

Boing-Boing Grimacy Bo-boing! Flagging-Pant-Bo-boing! Collapsyboingdoodle Bataboing, bataboing!

"Boingidyllic Boing-u-co-pi-a !"

"three down ... but two have bounced back!"

BOING, boing, boing, boing!

S-uperballisticbombastiboiingilisticelastoicosaboingluscious!

"Turning at the halfway mark..."

"My, the finale is heating up!"

[Boings drowned out by cheers]

p

[Ms Chronophage' jumps onto the Victor, the ground behind strewn with Golden Fragments, much as the proverbial Cicada sloughing off its shell.

Pointy Killing Appendages emerge, and decapitation -complete with debarbification promptly ensue.]

Minore Violento

[Ms Chronophage' commences sarcastic dialogue with the severed head.]

Boing, ow ow Ow Ow AARGH! slumpty

I like to boing.

I like to boing!

I'm good at it!

But my Blind Date!

What's yarh poison? That's undewly forthright! How loquaysheaus! Bore AND braggart!

[The by now clearly identified Mantissss exits left perambutting hexumphantl.]

Adagio Primo Tempo Adagio

Primo Tempo

Terrified-Boing!

I eat eyes first...

[teary-gnash-gnash] Luncheontime at [gulps] Downton! You-are gewing into MY-pile of-Skulls beard-and-all Tralalaleytallyheauth!

[Up the concourse, the brass band jovially plays on, oblivious to the unfolding carnage, as many further, if slower, PogoStickBearded Peoples Boing on:] Boing-boing! Boingy-Boing Bata-Boing! (...)

ffff

[The Curtain Falls as a Crescendo of Screams engulfs the massed peloton
of PogoStickBearded Peoples, Concluding Part I of Die Zauberkarotte]



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