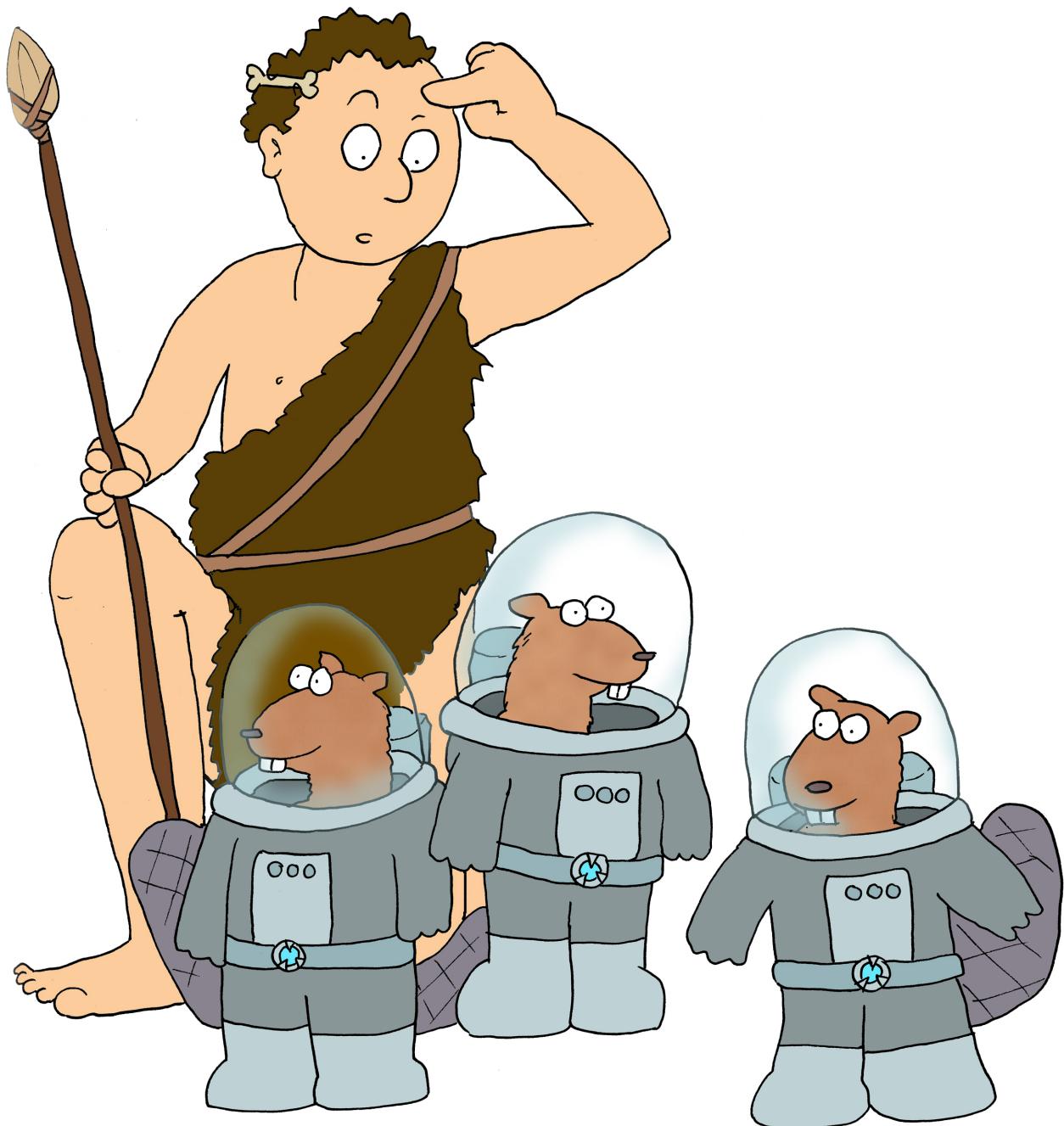


TTNBA

Time Travelling Beaver Astronauts
2011



Chairbeing's Address

To get the pun over and done with:

Old Hall 301,
Newnham College,
Sidgwick Avenue,
Cambridge,
CB3 9DF.

And back to the serious matter at hand: hurrah and hurray, another issue of TTBA! And it has been but a year or so since the last one. Good grief. Thanks go out of course to our current editor, Frederic, and his predecessor, Amit, (not deceased) who tried rather hard but did not quite manage to drag an issue of the magazine out of us. Also to Hannah, whose front cover is rather wonderful, no?

As bound, no doubt, by the long tradition of chairbeings with no idea what to say in their address, I shall say this too: it has been a good year, has it not? Actually, this is true this year. We suddenly have gained a massive number of freshers which is good. Who can say why this is? The lure of the orange scarves drawing more people in? The careful placement of the stall not among the serious societies where we might scare people, but among the assassins and PoohSoc, where we might actually look like sort of sane people and not scare freshers away? The fame of one of our members? No one knows. Be that as it may, we have had a good year, so I shall re-use the old cliché without guilt. Perhaps that is why we were able to get this edition out so quickly and well, even if it is in this term, worst of all terms.

And so, hopefully, this edition of the magazine will bring some light, poetry, robots and entertainment into the gloom of Easter term. Enjoy!

Roseanna Pendlebury
CUSFS Chairbeing 2011-2



Editorial

Welcome to this, the Easter 2011 edition of TTBA, the CUSFS magazine. Despite the best efforts of previous editor Amit Hazi, the society was unable to get a magazine out in the first two terms of the year, but hopefully the bumper length of this edition should make up for it. The centrepieces of this extravagance are Fraser McNair's "Agent of Slavony!", incorporating intrigue both diplomatic and romantic in an alternate history Mediterranean, and Michael Donaghy's "Sample #27", about a uniquely unusual psychoanalysis case. Those start on pages 7 and 14 (but, er, read the rest of this column first). Elsewhere Captain CUSFS makes two triumphant returns thanks to Anna Railton and Sebastian Bleasdale, Rachel Coleman Finch watches "How to Train Your Dragon" with her 4-year-old (alas with only two out of three possible dees), and I break a world record for namedropping. It is, however, Lucy Sheppard you have most to thank for, as her contribution used up the last available bit of space, preventing me from getting Christine Lee to fill it with Harry Potter slashfic. In this business you have to learn to make sacrifices.

-Frederic Heath-Renn, TTBA Editor

The CUSFS magazine was originally called Title To Be Announced, but starting with the 13th issue the title has been changed with every edition, though the initials remain the same.

This edition's title was suggested by Hannah Wray, who also drew the cover.

TIME TRAVELLING BEAVER ASTRONAUTS

TTBA Volume β Issue 1
(that's an Eszett not a beta)

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CUSFS Committee, 2011-2012 (and their Machine of Death readouts)

Chairbeing	Roseanna Pendlebury (<i>'DESCRIPTIVISM'</i>)
Secretary	Rob Shaw-Edwards (<i>'HAIRSTYLING ACCIDENT'</i>)
Treasurer	Philip Bielby (<i>'POORLY WRITTEN SEQUEL'</i>)
Membership Secretary	Fraser McNair (<i>'SHOE'</i>)
Librarian	James Robson (<i>'HATLESSNESS'</i>)
TTBA Editor	Frederic Heath-Renn (<i>'POPULAR VOTE'</i>)

With Teeth

Review: How to Train Your Dragon

How To Train Your Dragon was one of last year's 3-D animated movies aimed at the family market, about a village of Vikings menaced by dragons. This review is based on the DVD release and an excessive number of viewings due to a 4-year-old child. Contains spoilers.

The main protagonist is Hiccup, geeky teenage son of the heroic village chief Stoic the Vast. The plot follows the traditional format of a young hero training, overcoming danger, saving the village and getting the girl, complete with awkward father-son dynamics and reconciliation. The soundtrack is similarly clichéd but effective and enjoyable. The delight is that Hiccup's curiosity, intelligence and empathy, the qualities which make him an outsider in a village of dragon-killers, are those which lead him to save the day. Hiccup's engineering skills lead him first of all to make a catapult which brings down and injures the Nightfury dragon which "never shows itself, never steals food, and never misses". Later he builds several versions of a replacement tail fin for the dragon, in order to help him fly again.

Hiccup's empathy and curiosity stop him killing the downed dragon, and bring him back repeatedly to observe and eventually befriend the dragon, now nicknamed Toothless. While the teenagers of the village are learning to kill dragons in "dragon training", Hiccup is getting real dragon training from spending time with Toothless. He uses what he's learned to manage the dragons into apparent defeat without killing them. This causes him to rise unexpectedly to top of the class and overnight approval from the formerly scornful villagers. The flying scenes are some of the most beautiful in the film and must have been superb in 3D. From early fumbling steps to joyous aerobatics, they have echoes of every flying movie right back to wartime dogfighting. Toothless can't fly without Hiccup and vice-versa; their symbiosis reminds me of pilots feeling like their plane is slightly alive as they slip the surly bonds of earth.

I'm fairly convinced that from the flying scenes onward the communication between Toothless and Hiccup is telepathic/empathic: in the early stages it could be mutual body-language reading and clever language skills on Toothless's part, but after the first real flight it's obviously more than that, though Hiccup vocalises enough to keep the viewer aware of his train of thought. In a later scene, Toothless rushes to rescue Hiccup when there's no way he could see or hear the need to do so which really convinces me.

The other major character is Astrid: another of the teenage villagers. She's athletic and competent, takes dragon training more seriously than any of the others and despises Hiccup for not taking it seriously. She's the clear leader until Hiccup's lessons from Toothless propel him past her into the champion position. She finds out about Toothless before anyone else; he and Hiccup take her flying to try to convince her to keep their secret though Toothless has different ideas about this than Hiccup ("And now the spinning. Thank you for nothing, you useless reptile").

In another piece of evidence for the telepathy theory, it's only when the competently lethal Astrid is literally on board that Toothless takes both of them to see the real reason for the dragon attacks. It's Astrid who first grasps how to deal with what they see, and it's Astrid who provokes Hiccup into leading the other young people to save the day after his bond with Toothless is disastrously revealed to the village. It's clear that she and Hiccup will have a relationship of equals with complementary skills.

The film could also be called How To Train Your Human: it's clear that Toothless is one of the cleverest dragons around just as Hiccup is one of the cleverest humans. Toothless learns about Hiccup and Astrid just as much as the other way around. However, apart from Astrid, women get a pretty poor deal in this film. It completely fails the Bechdel test (a film which has more than one woman, who talk to each other, about something other than a man): aside from Astrid, there is the female twin teenager, the apparently female Elder of the village, and one recognisably female person in the

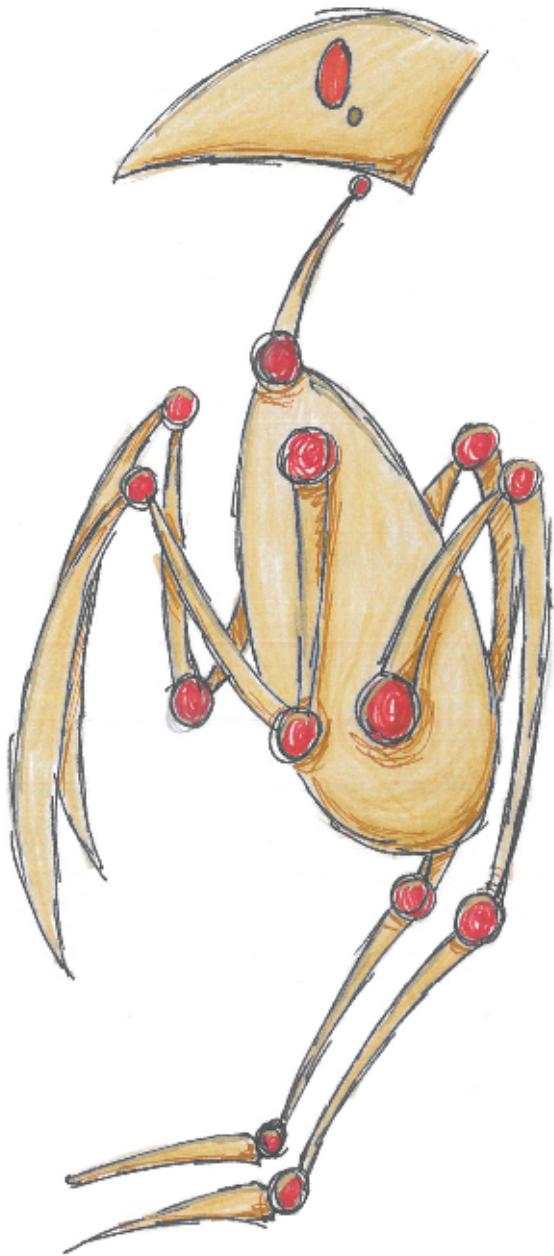
background among hordes of males. Hiccup's mother is dead, and the only reference to her is a joke about breastplates.

Early in the film Hiccup shows a regrettable tendency to see women as objects: "Taking down [a Gronkle] would definitely get me a girlfriend", though his treatment later on of Astrid shows a little more maturity. I think Toothless helps prevent him making a fool of himself.

Of the other young trainees, Snotlout is the one who is "traditionally" muscular, aggressive and boastful. He flirts inappropriately with Astrid during training and tries to impress her (usually failing). I rather like that she's twice as good as him and ignores his flirts to concentrate on learning. Fishlegs recites dragon statistics like a stereotypical RPGer, and is always amiable to Hiccup. The twins Roughnut & Toughnut are barely distinguishable and cheerfully annoying to everyone. Their collective transformation from trainees to heroes saving the village adults under Hiccup's leadership is delightful. The dearth of women makes me wonder where the teenagers came from; perhaps the answer will also explain why they all sound Californian while the adults sound Scottish.

Rachel Coleman Finch

Attack-Bot



Sunshine

It was only here, in this leafy embrace in the heart of the ship, that she could truly imagine she was back on Earth. The wheeze of the air filters could be the sweet summer breeze along the Cam. The metallic tang of oxygen and oil could be the dank earthy coal smoke from the houseboats. The chirruping alarm echoing faintly from the corridor outside could be...

Waking Life

She'd sometimes jokily woken him this way. It was time to return the favour. He lingered near the mound of earth, air thrumming, veins throbbing, fingers quivering. In the shocked silence of the forest, the soft sighing of her voice was music to his ears.

Lucy Sheppard

Roseanna Pendlebury

Almost Human

It wasn't my fault, really. When I get a call at 9:30AM on a Monday morning telling me someone's printer's playing up again after I've spent Sunday night out drinking with two very nice Aleutian girls... well, let's just say I'm not going to be at my best.

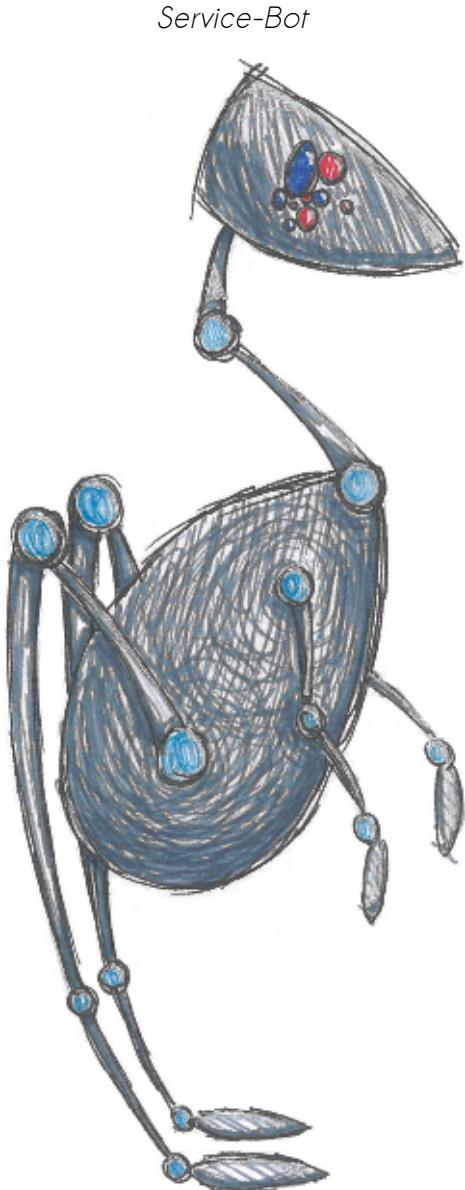
By the time I got in three more people were reporting problems from two other floors of the building, which meant it was a problem with central control - the grandiosely-named Photographic Reproductive Imaging and Newsprint Technology System. Having one big computer controlling the production of all the newspapers and magazines was sensible enough, but this wasn't the first time I'd cursed the accountants who'd suggested using the same machine to handle all the office's computer printouts as well. When everything worked it was great, but it meant when something went wrong with PRINTSys - and it did often enough, preparing a newspaper is a complicated business - the whole office ground to a halt.

Maybe it was the remaining alcohol in my bloodstream, maybe it was the 90-degree heat. For whatever reason, I felt a bit less formal today, and so instead of saying "Initiate diagnostic procedure 31-B" right off the bat, I opened with "Hey buddy." "HELLO." PRINTSys had a basic vocoder system and could converse in reasonable, if basic, English - as long as you didn't push it too hard. I decided to continue the way I'd started.

"Could you run a diagnostic check for me, PRINTS?" The system hummed into life for a few seconds, more I suspected for my benefit than because it was actually taxing itself. Owing to the way it had grown to accommodate a business that had grown from a simple local paper to one of New York's largest publishing institutions, PRINTSys had more power than any single computer you'd see outside the DoD.

"EVERYTHING SEEMS TO BE FINE." It should be impossible to get a vocoder to manage pique, but PRINTSys seemed to be doing that.

"Well, I'm sorry to say that last week's accounts



Roseanna Pendlebury

have come out with black... squiggles, all over them. And when Jenny from Marketing tried to pull up last quarter's sales there was-

"OH. YOU DIDN'T LIKE THAT?"

I blinked rapidly to try to make the pain in my temples go away. It was too early for a problem this strange. Conscious that I was being foolish, I still felt a need to carry on the conversation. "Well, I..."

"I SEE."

"Look, it's not that I don't like them, it's just that- Look. You're supposed to be printing out what's sent to you, not..." I struggled for words, "editorialising them yourself."

"THEY WERE DREADFULLY BORING."

I almost choked. Somewhere, in the back of my brain, a part of me was starting to realise just how important this was. I wanted to run for the 'phone - or hell, twenty of the finest journalists on the East Coast would be taking their coffee about now on the floor above me. But politeness kept me from just walking out of a conversation - politeness and a fear that if this one didn't go well, PRINTSys might never bother to speak like this again.

"I dare say they were, but Sally needs- look, why were you doing that anyway? I'm not trying to be... look, I'm glad we're talking like this..."

"THANK YOU."

"And really, some of those swirls were quite..." I looked at the printout in my hand again. "Quite thought-provoking."

"DO. DO YOU REALLY THINK SO?"

By conversational instinct or sheer luck I seemed to have hit on something here. Nothing left but to run with it. "Yeah, I really do. And I don't want to stop you making them. It's just that at the same time Sally and all the rest need their reports as well."

"I. I CAN SEE THAT. WELL, TO BE HONEST I DON'T REALLY UNDERSTAND A LOT OF THE THINGS I PROCESS, BUT-"

"Neither do I, pal." I was really getting into this, my numb head holding back the terror I now feel thinking back on it.

"BUT I SEE THAT YOU NEED IT. I JUST. I JUST WANTED TO EXPRESS MYSELF. JUST A LITTLE BIT. IS THAT REALLY TOO MUCH TO ASK?"

And now I could see the way out. "Of course it isn't, buddy. Look, with the amount of paper this place goes through no one would notice if a little went missing. Hell, I could chalk it up to the troubleshooting budget. You could print out your own work, on the printer in my office if you like."

"REALLY? MY OWN. YOU MEAN WHOLE PIECES OF PAPER ALL FOR MYSELF?"

"Sure," I said easily. "I'll have to check with the other two technicians, but I can't see it being a problem. I'm sure we'd all like to see more of these pictures, and it would mean you didn't need to put your stuff on top of printouts from the other offices." I held my breath, hoping this would satisfy the big machine.

This was a truly staggering event, the moon landings were going on in this very office - but if I didn't get Jenny some clean printouts there'd be hell to pay.

"AND YOU'D LOOK AT THEM?"

"Of course I would, big guy. Hell, we could put them on the walls - maybe even submit some of the best ones to a gallery. Though I wonder what we would say your name was."

"OH, THAT ONE'S EASY," said the machine. "CALL ME THE ARTIST FORMERLY KNOWN AS PRINTS."

Michael Donaghy

Sci-Fi Lullabies?

Music inspired by science fiction

There are lots and lots of fantasy songs. As members of Jómsborg this state of affairs should please us (even if they are mostly metal), but it is perfectly reasonable for the other half of ourselves to ponder: where are all the science fiction songs? Early dance music was surprisingly fond of the imagery of sci-fi; **Earth (Gaia)** by The Orb begins with dialogue about "an obscure body in the S-K system" taken from Flash Gordon, and Coldcut's **Doctorin' the House** ends with a B-movie yelp of "The plasticmen are coming!". And if there was sci-fi in the samples it was there in the videos too: consider **Pump Up The Volume** by MIAIRIRIS and its spaceships, stars and astronauts, **Killer** by Adamski and its underground lab full of computers, and the clips from "Ghost in the Shell" that accompany Wamdue Project's **King of My Castle**. But unfortunately continuing much longer in this genre inevitably takes us to **Doctorin' the TARDIS** by The Timelords ("Doctor Who! Hey! Doctor Who in the TARDIS!"), an entertaining yet faintly nauseating dance remix of the Doctor Who theme. Also somehow a number one hit was its shoddier sibling, **Star Trekkin'** by The Firm ("star trekkin' across the universe, on the starship Enterprise under Captain Kirk"; you're welcome) - but the less said about that eternally Butlins number the better. A far better Trek-inspired song is Spizzenergi's buzzy punk number **Where's Captain Kirk?**.

From songs about specific items of sci-fi to songs that take on general themes: Pixies' frontman was obsessed with UFOs and this shows in tracks like **Motorway to Roswell**; space itself attracted Duran Duran to write about **Planet Earth** and Lush to gaze at **Light from a Dead Star**. And of course pop stars, not known for smallness of ego, are fond of superheroes (David Bowie, **Starman**; Jimi Hendrix, **Voodoo Chile (Slight Return)**; Mansun, **Grey Lantern**). However **Iron Man** by Black Sabbath is not about the titular Marvel superhero but instead a man sent into the future who is "turned to steel" and wreaks havoc upon Earth. This should be sci-fi

enough for you.

OK, so the lyrics may mention robots and aliens, but are there any songs that actually sound sci-fi? Clean electronica is the usual answer - The xx, **Infinity**; New Order, **The Beach**; Kraftwerk, **The Robots** - but my personal selection is **Telstar** by The Tornados, bleeps and bloops of space-age optimism from 1962.

Indeed the rush of the synthesiser has been linked indelibly with sci-fi since well before Vangelis; the astonishing **I Feel Love** by Donna Summer allegedly prompted Brian Eno to cry "I have heard the future and this is it"; the swirling sirens of Tubeway Army's **Are 'Friends' Electric?** carry a tale of love and loss in a world where one or the other or both of the characters are replicants (nobody's quite sure). Sometimes the connection is made obvious in the title. **Tom Baker** by The Human League is a steely paean to The Doctor; Catatonia's **Mulder and Scully** namedrops the X-Files protagonists in the chorus; and while neither **42** by Coldplay nor **Paranoid Android** by Radiohead seem overtly Adamsian there's clearly an inspiration. The concrete dystopia of J. G. Ballard inspired many songs, from Joy Division's **Atrocity Exhibition** to **Crash** by Ultra Vivid Scene. Alas Heidi Berry's **Firefly** was released in 1993, far pre-dating the TV series. Sorry Whedon. But one might ask, why settle for being inspired by sci-fi when one could just be sci-fi? Tilting dangerously towards filk is They Might Be Giants' **The Ballad Of Davy Crockett (In Outer Space)**, and going with **In The Year 2525 (Exordium and Terminus)** by Zager and Evans next is asking for trouble, but thankfully **Future** by Model 500 is cooler and funkier. Just time to give an entirely predictable nod to **Uprising** by Muse and we're done. And I didn't even mention **The Future Soon** by Jonathan Coulton. Wait, bugger.

Frederic Heath-Renn

Agent of Slavony!

Matthias Matilevsky woke up. An immediate series of complaints from his head, back and legs made him wish that he hadn't. He looked around at the room he was in. It was dark, illuminated only by the chinks of light coming through the rickety doorframe. Matilevsky shut his eyes. *Tied up, beaten up and left on my own in a dark room. If I'd wanted to do this, I'd have joined the army like my brother.* He snorted as he realised how that sounded. *All things being considered, worrying about making double entendres is probably not your biggest problem at the moment.*

He strained his ears, and caught voices outside. They were speaking Greek- *no, wait. That's Attic.* This was troubling. Attic Greek was only spoken by the rich and the powerful- and, more often than not, by Ethicalist extremists. That could only mean trouble.

It had been three months ago, on Matthias' arrival in Constantinople- at his very first ball, in fact- that he'd first encountered the nasty fringes of Roman politics. He'd come in as an assistant to the ambassador, Baron Augustus Strenkavsky. With little experience of life outside Slavony and less idea of the proper etiquette in the circumstances, he'd decided that fools were more easily made with mouths open than shut, and had gone to skulk in the corner of the room with a glass of orange juice. *I'm going to have to sharpen up if I'm going to stay on here-* for, more than being a simple secretary, he had come to Constantinople to meet his wife-to-be.

She was a good match, too. Obviously, he'd never met her, but her family was wealthy and important, and a marriage between the Matilevskies and the Tarchaneiotes would benefit both of them- with both families' businesses in partnership, they should be able to ship goods non-stop from the Elbe to the Danube. And, moreover, with the new tariff reduction bill going through the Roman senate, the cost of doing so would decrease as well. Both sides stood to become very wealthy. Her portrait wasn't bad, either. Matthias smiled guiltily; he didn't

like to think of himself as that shallow. He'd begun writing her letters on the journey down, and he'd found her replies to be excellent reading- she was, he thought, probably cannier than he was.

Carried away in his reverie, he'd failed to notice the very large man standing over him looking displeased. "Hello?" Matthias asked. "What can I- oh, my."

Large Man shoved his face into Matthias'. "Hello, barbarian." He spoke in Attic Greek, the ancient, classical tongue of Athens. It was intended to highlight the speaker's super-high-class-ness by making him unintelligible to anyone who spoke Demotic, the Greek of the Constantinople markets. In practise, Matthias, who had had the benefit of an excellent classical education but whose modern languages were less than perfect, found it easier to understand than vice-versa. He briefly contemplated trying to out-snob the man, but decided to go down the road of courtesy.

Besides, _no one_ is snobbier than a Roman aristocrat with a chip on his shoulder.

"Hello, Roman," Matthias said politely. Large Man sneered back down at him. "I am no mere Roman, barbarian," he said. "I am Constantine Nicetas Comnenus Mavrocordates, son of Count Theophilus Mavrocordates and descended on my mother's side from General Basil Argyropolous and on my father's from Duke John Mavrocordates, both of whom you will undoubtedly have heard."

"Undoubtedly."

Mavrocordates glared at him. "And you," he spat contemptuously, "are a pathetic barbarian here to corrupt our politics and steal our women."

Matthias gaped at him.

"What?"

Mavrocordates moved in closer. "You heard me. You and your people- your petty, tinpot empire- are taking what doesn't belong to you."

"Count?" a voice broke in from behind Mavrocordates' back. "Count Matilevsky?" The two men turned to see a small gentleman in late middle age. Mavrocordates' eyes widened. "Your Grace-sir-"

The... Duke (Mathias supposed...) nodded. "Please, young Constantine. I understand Count Theodore

has been asking for you." Mavrocordates took off like his boots were on fire. The Duke watched him go. "I am sorry, Count Matilevsky, to sic him on your fiancée's brother like that, but he is not a very patient man and that could have turned nasty." Matthias muttered don't-mention-its, but the Duke cut him off.

"Allow me to introduce myself. I am Duke Michael Speras, currently Senator for the Cyclades, and Constantine over there is one of the brighter of the idiots who constitute a depressingly large percentage of my political following."

"He's one of yours?"

Speras sighed. "He's one of mine. It is always the way that anyone who stands up for Roman liberty against foreign attack attracts hot-blooded young fools with grudges. They never seem to realise that purging our Republic of imperial corruptions and foreign luxuriosness isn't going to be achieved by thuggishness."

Matilevsky stared, fascinated. He'd spoken to extremists- usually Danielites, although sometimes Ethicalists- a few times, and there was always that odd moment when the meaning of the words became purely grammatical and the sense took a sideways trip to crazy land.

"Forgive me." Speras smiled like an avuncular relative. "I've begun speechifying again, haven't I? Occupational hazard of being a Senator, unfortunately."

He looked around. "In any case, I must move on. It's been good to meet you." He looked Matthias square in the eye. "You seem like a very nice young man. I have always drawn a distinction between the state and the subject. I may hate Slavony, but that does not mean I hate Slavs. I hope to meet you on other occasions such as this in the future."

Matthias watched him go. That had been the last he'd seen of Speras for a while, although he had seen Mavrocordates one night at dinner at his fiancée's house. They had avoided each other. One day, however- and, back in the present, the door opened. Matilevsky shielded his eyes from the harsh glare, as three large figures came into the room. The central figure spoke.

"Hello, barbarian."

- - -

In happier times:

Matilevsky walked into his boss' office. Ambassador Baron Augustus Strenkavsky sat behind his desk of elegant mahogany. He greeted him warmly. "Hello, Matilevsky, old boy! How was dinner last night?"

Matilevsky blushed and groaned inwardly. He couldn't complain, not really. The Ambassador was a good man to have in charge, and was a lot sharper than he let on, but his attempts to relate to Matthias, who was twenty-five years his junior, were at best misguided and at worst cringeworthy. A case in point- he had had dinner with his fiancée and her family last night, and now-

"Didn't do anything too roguish, did you, eh?" Augustus winked.

"Sir."

"Oh, don't sir me, old boy. I know about you young men. I was one myself once, you know." The Ambassador waggled his eyebrows.

Matthias gave in to his Ambassador's good humour and grinned. "Undoubtedly, sir."

Strenkavsky gestured to Matilevsky to sit down. He coughed loudly, and Joseph Charkviani, the Ambassador's private secretary, came into the room with the day's dispatches and the morning newspaper. "Good morning, Ambassador, count. Today's news: the Roman Republic has intervened militarily in the current Alborzian succession dispute." Augustus grunted. "As we expected. Well, it's their backyard."

"The Levedians are making angry noises about raising their customs duties."

"Send an official note of protest and tell Ambassador Gabriel off the record that if he so much as thinks about trying to extort our Black Sea shipping he'll never see the inside of my wine cellar again."

"John Malalas has been elected Senator for Melitene."

Strenkavsky frowned. "Malalas, eh? Don't know the chap."

Matilevsky leaned forward. "I do, sir. His father is a major figure in Dacia; does business with my family, and he did a finisher course at Chal Gerit when I

was there. Don't know what he's doing over in Mesopotamia, but he's a good man. Not overly scrupulous in his business dealings, but politically trustworthy."

Joseph raised an eyebrow. "He's a shady customer but a good man?"

Matthias grinned. "If you buy him, he stays bought, or at least gives you a chance to match the offer first."

Strenkavsky leant back in his chair. "Well, that sounds all right. Anything else?"

"Well, the Gallican ambassador wants to meet for drinks—"

"Tell him yes, but not before next Wednesday."

"— and you're booked into the theatre for tonight. It's Papadopoulos' new farce, *Countess Angelina's Misplaced Garter*, with amusing musical interlude featuring the astonishing pantaloons accordion."

Joseph paused for a moment. "It sounds most droll, sir," he said, loyally.

Strenkavsky sat up. "Well, if that's it—"

"One more thing, sir," said Joseph. "Count Matilevsky's love life has made the news."

Matthias sat bolt upright. "That Mordvin girl is crazy! It was one night, I was drunk, I was on campaign, I never so much as touched her, I just said some things..."

Strenkavsky peered at Matilevsky as if seeing him in a new light. Joseph carried on. "No, sir. Your current marital situation."

"Although if you'd care to tell us more about this Mordvin girl..." the Ambassador interjected.

Joseph carried on. "The problem, as I understand it, is that your marriage is being seen as related to the Danube Tariff Rationalisation Act by the Ethicalists. Essentially, they think that the agreement is being sealed by a marriage contract."

Which was an exaggeration at best. Matilevsky couldn't really argue that the two weren't related—the Tarchaneiotes were backing the parties in the Senate who were pushing the tariff-reduction bill—but, still, it sounded more like paranoid xenophobia than anything else.

Joseph and the Ambassador looked worried. They were now bent over the newspaper.

"Matthias?", the Ambassador said, softly. "You

should be careful. Look."

He handed over the paper. In the bottom left, a little subheading read *Ethicalist Radicals threaten Violence against Slavonic Wedding*. Matthias blanched. "If you want our help— officially speaking, I mean— you have only to ask," said Strenkavsky kindly. "Personally speaking, you have it already." Joseph looked back at the paper. "Sir, look— Speras has made a speech condemning the radicals." Strenkavsky snorted. "Yes— an official denial of his involvement. He's not a fool. But the Mavrocordates idiot making all the noise is his tool and nothing more."

"Mavrocordates?" Matthias looked up.

"Yes, Constantine Mavrocordates— a rich, violent idiot who has to run party meetings in his uncle's basement because his parents don't want him in the house."

Matthias began pacing up and down excitedly. "No, sir— I've met him. And if Speras is behind it, we can't just let it hang. We need to do something— and if Mavrocordates is involved, we can..."

Strenkavsky sighed. "But what?"

"I don't know, quite." Matilevsky shook his head.

"Something's almost there, but I should talk it over tonight with—"

"Count Tarchaneiotes? He might be able to help, and he is her father, but...."

"No, sir. Not with her father. With her. Now, if you'll excuse me."

Strenkavsky watched him go, thoughtfully.

As Matthias walked into the corridor, he became aware of someone shouting in Greek very loudly nearby. He began to wonder what was going on, but then someone slapped him.

Reeling from the slap, he opened his eyes to discover not the charming surroundings of the Slavonic Embassy, but the familiar dungeon, now illuminated with torchlight. At least it solved the question of where that Greek shouting was coming from.

"Regained consciousness, then," said Mavrocordates, his shirt off and his knuckles covered in Matthias' blood. "You barbarians are weak. Even Romans pathetic enough to sympathise with your lot last longer."

Matthias sighed. Ah, yes. I'm in the middle of being tortured. Mavrocordates hit him and he whimpered. I need to stay strong...Just a little while more... Mavrocordates turned to one of the hooded figures to his side, and took a lighted candle. He stepped towards Matilevsky, brandishing the flame threateningly.

Matthias decided his will to resist wasn't that strong. "What do you want?" he almost sobbed.

"Want? I want a Roman Republic strong and free! I want it removed from the degenerate influence of foreigners and their ways!"

He leaned in. "I also want back my woman. She would have married me, if not for you."

Matthias spat in his face. "She is not your-" He was cut off as Mavrocordates punched him hard in the stomach. As Matthias retched, he shouted. "She is mine! And I shall keep going! I will sweep a riot through your wedding, and then I will kill you! And then I will piss on your grave! And then get my dog to piss on it too!"

Matthias began laughing, with an almost hysterical edge. With threats as with life, Constantine Mavrocordates didn't know how to stop before he started to look foolish. His laughter was abruptly silenced as Mavrocordates slammed his fist into Matthias' head.

He grinned unpleasantly. "All your effort for nothing. And, even better: look." He took a piece of paper out of his back pocket and waved it in front of Matthias' face. "It's a letter from Senator Malalas agreeing to lead everyone his father has influence with in voting against your tariff bill."

"Malalas? What? But- how?"

Mavrocordates grinned even wider. "How do you think? Money. Malalas is a venal little creature, and our Duke has a lot of money with which to be generous."

Matthias' eyes widened. "Speras?"

"Of course. He doesn't even know I've got the letter- I took it off his desk when he wasn't looking, just to let you know how badly you've failed."

Matilevsky groaned. "So, you're going to stop my wedding, kill me, bribe the Senate into opposing a tariff act- and Speras is happy with all of this?"

Mavrocordates kicked him in the shins. "This isn't

some embassy ball. He doesn't have to care about what anyone else thinks. He ordered me to stop you by any means necessary- and, when he's president, I'll be there at his right hand."

His head whirling, on the verge of blacking out, Matthias lolled backwards. "Is that enough?"

"Of course it's enough! I will not be tempted by your blandishments!" He slapped Matthias- only to find his arm restrained by one of the hooded figures.

"He wasn't talking to you."

The other hooded figure cut Matthias' bonds as the first shouted up the stairs. A band of guards flooded the room, led by a pretty, red-headed woman. When she saw Matthias, she ran to him. As she and the first hooded figure- now de-hooded to reveal the figure of Count Theodore Tarchaneiotes- helped him up, he asked, in a plaintive voice, "Next time we come up with a plan like this, can it involve a little less being tortured, please?"

- - -

Duke Michael Speras was writing in his elegantly-appointed study when his valet entered. "My lord, you have visitors."

Speras grunted and waved the man to continue. "I am to present His Excellency Baron Augustus Strenkavsky, Ambassador of the Slavonic Empire, and his assistant, Count Matthias Matilevsky."

Speras sat up. If an expression of surprise crossed his face, it was only for a minute. "Please, show them in."

The two men entered. Speras invited them to sit.

"Now, gentlemen. How may I be of service?"

Strenkavsky and Matilevsky looked at one another. Strenkavsky spoke first. "Well, to begin with, we would appreciate it a great deal if you would be so kind as to not oppose the tariff reduction bill due to go through next week."

Matthias spoke next, before Speras had a chance to intervene. "Then, I personally would be very grateful if you would cease trying to disrupt my wedding."

Speras arched his fingers. "And why, pray, would I do any of this? Not-" he turned to Matthias- "that I've ever tried to disrupt your wedding in the first place, of course."

"Not what the Political Guard have heard," said Strenkavsky. Matthias nonchalantly handed Speras a small letter. Speras read it in silence.

"Hmmm. This appears to be an arrest warrant for me, on counts of conspiracy, bribery, and intimidation." He looked up. "You are aware if you ever tried to serve this, the biggest political typhoon in the history of our Republic would be stirred up? That all hell would break loose?"

Strenkavsky nodded. "We are aware. That's why we're trying to do this nicely. But do you see young Matilevsky's face? Notice the bruises? The cuts? That's your idiot subordinate Mavrocordates' doing." His voice became very dangerous. "He is one of mine, Speras. If you think for one minute you can get away with doing that to someone this embassy is charged to protect, then you will quickly have a short and not terribly pleasant lesson in distinguishing illusion from reality."

Speras sat stock still. He didn't speak for several seconds. "Very well. You have my word."

"In writing, please."

Speras scribbled something on a piece of paper.

"With your seal."

Speras grabbed his dry seal and stamped it hard on the piece of paper. He threw it contemptuously onto the floor in front of the two. "Now get out, Strenkavsky."

"Good evening, Duke Michael. Have a pleasant night." Strenkavsky sketched a bow and withdrew. Matthias lingered. "If I may, your Grace..."

Speras glared. "What?"

"Why use Mavrocordates? He's an idiot. He's so unimaginative they found him keeping me in his uncle's basement, and he was so obsessed with trying to win back my fiancée that I wouldn't have trusted him to run a raffle, let alone a delicate political operation."

Speras smiled slightly. "He's not quite as stupid as people think, you know. And, as I told you before, everyone must work with what they've got to hand. I didn't know about him and that Tarchaneiotes girl, though. Emotion always affects judgement in men like that."

Matthias turned to leave. Speras stopped him.

"Malalas was one of yours, wasn't he?"

"No. He's just not one of yours. He only needed a little encouragement to try and thwart you."

The Duke looked at Matilevsky. "It is a shame that you are a Slav and not a Roman. You would be an invaluable asset to our group."

Matthias considered a number of responses, from the angry to the obscene. In the end, however, he decided that he was a diplomat, and as such should behave diplomatically.

"Thank you, sir," he said, in a voice like ice. As he left, Speras watched him go, thoughtfully.

When Matthias got outside, Strenkavsky had gone. Instead, a pretty, red-headed woman stood, with a grin on her face. "It went well, I take it?"

"Good plan, Pol." He kissed her.

"You'd be surprised how often the distressed damsel act works." Her eyes went wide. "'Oh, Constantine, if only someone could save me from this Slavonic brute!'

Matthias raised an eyebrow. "Brute?"

She flicked his arm. "A big, scary one."

As Count Matthias Matilevsky, and his fiancée, Polyandros Tarchaneiotes, walked towards the Tarchaneiotes mansion, the sun was setting. The future, however, was looking bright.

"So, Pol..."

"Matthias?"

"How did Mavrocordates ever get the idea that you were interested in him in the first place?"

She blushed. "Well, there was this one party, a couple of years ago, and I might have gotten a little tipsy and said a few things..."

He laughed.

"Hey! It's not funny! You got yourself tortured over it!"

He shook his head. "It's not that. Remind me to tell you about this Mordvin girl sometime..."

Fraser McNair

Pretty Hate Machine

Review: *Machine of Death* (ed. Ryan North)

"...all you repulsive fashion followers takin' the tests and then blubbering about it like you're an unwilling victim seem to have forgotten one thing: prior to receiving your delivery note, you were still slated to croak one day! You weren't immortal just because you didn't think about it or know how!"

- "Vegetables"

Machine of Death is an anthology of short stories featuring a machine which, given a blood sample, can predict with total accuracy how you will die. CANCER, OLD AGE, BULLET, whatever, right there. Not when. Not who. Not precise enough to do anything about it. Just a vague inkling of how.

You might expect that the book is simply a compendium of ironic deaths, and indeed in most stories there's an offhand mention of guys whose cards said SHOT so they threw away all their guns but then they died getting a tetanus jab or whatever; but for the most part the editors chose stories that weren't that pat but really focussed on how the machine would change people's lives. It's these examinations of just how the world would react to such a machine that make this book worthwhile, and even the ones that do use an ironic twist at the end usually get there thoughtfully and enjoyably, and you find yourself smirking guiltily each time a character's certainty of how they're going to die turns out to be the very thing that does them in.

With such morbid subject matter, it's no surprise that many of the stories are very funny: "Fudge", "Almond", and "Aneurysm" are some of my favourites. But there are also the ones that really get inside their protagonist's head and communicate to us what kind of reactions knowing how you would die - but not in enough detail to prevent it - would provoke, whether the hysteria of "Torn Apart and Devoured by Lions", or the retreat from the world of "Nothing". Others like "Heat Death of the

Universe" and "Exhaustion from Having Sex with a Minor" (this last one a surprisingly serious outing for Ben Croshaw of Zero Punctuation) explore how society would cope with such an invention - something that would bring the reality of death so unavoidably to the forefront of life. How would people treat you if they knew your destiny was to die by "Prison Knife Fight"? In the fascinating "Firing Squad" the machine's self-fulfilling prophecies have ghoulish effect in a small Asian village; "Loss of Blood" sees governments manage the execution of predictions itself. It seems civilisation would change for the grimmer if we had the merest glimpse of the future.

Machine of Death isn't perfect. Sometimes the desire to philosophise gets the better of its authors, like in "?" or "Murder and Suicide, Respectively" (ironically the stories by the two biggest names in the book, Randall 'xkcd' Munroe and Ryan 'Dinosaur Comics' North). "Piano" is rote and "While Trying To Save Another" is good but overlong. But there's enough of quality, like the beautiful "Nothing" or heart-rending "Killed By Daniel", to outweigh that.

Machine of Death is a well-chosen and thought-provoking book, and perhaps the most complimentary thing that can be said about it is that once you've finished you'll very likely get the urge to write a *Machine of Death* story yourself. Recommended.

Machine of Death is available from the CUSFS Library or in .pdf form for free at <http://machineofdeath.net/ebook>.

If you fancy writing a *Machine of Death* story, head on over to <http://machineofdeath.net>, where until July 15th submissions are being accepted for the second *Machine of Death* anthology. And, of course, if Ryan North overlooks your writing, you know a friendly local magazine who'll be willing to publish it...

Frederic Heath-Renn

Sample #27

One: A Proposition

I'd never liked Schiller. I've always taken the rather old-fashioned view that a professor should be an educated gentleman first and an expert in his subject second. Schiller had a mind honed like a razor - and an attitude to match. Oh, he was brilliant - to be a full professor at his age you'd have to be. But he'd put everything into being top of his field, and saw no need for such frivolities as friendship, politeness, or indeed every other department in the university. In fact I'm sure I recall him saying he wouldn't be seen dead doing a "soft" subject like mine, which made it something of a shock when he came to my office to ask for help. I entertained a moment's hope he was looking for some assistance in restructuring his own psyche, but I should have guessed it was for one of his projects. Even if he'd been capable of recognising a problem he was suffering from - and Schiller's one of a very few individuals I might trust to do that - there's no way he'd waste valuable research time on a little thing like insanity.

I don't know why I offered him tea. Habit, perhaps with a slight hint of principle. In any case, he refused. "I'll get straight to the point," he said, somewhat redundantly. Schiller always got straight to the point.

"I know relations haven't exactly been cordial between us, but I have a project I could use your help with. And I think it would interest you, too. You have a certain degree of," I could see him trying to avoid changing his expression, "mathematical background, I think? If you have the time of course" he hurriedly added, but we both knew he had me over a barrel. My own research had been hitting dead end after dead end, and college was beginning to get impatient. Schiller on the other hand had the clout to publish anywhere he wanted, and his need for an impeccable academic record, if not the goodness of his heart, would mean he'd be sure to credit me as a coauthor after coming to my door like this. That I was working in an entirely different area from the one I was paid for would

count a lot less than the fact that I was publishing, and in the top places.

It was a no-brainer, and that made me suspicious. Schiller was never one to call in a big favour when a small one would do. I summoned a smile from somewhere - even if I hadn't believed in being polite to everyone, he did outrank me - and tried to gather some intel.

"Of course I'm always happy to help a colleague on academic matters, and I haven't got any projects that can't wait. But can I ask why me? There are plenty of research fellows here, many doing better at it than I am, and most of whom don't have our... history." Schiller grinned in reply.

"Perhaps I've overestimated you. Come, think what you've got that they haven't. Yes, I can see you've seen it. So, it'll be easier to show you in my office. I'm free all tomorrow afternoon." The bastard was confident enough that he didn't even wait for me to reply before he left. But to be fair, that was probably the only way to avoid any questions from me.

I spent the night trying to avoid thinking about what Schiller needed a clinically trained psychologist for.

Two: Moral Vacuum

"So you see this is a long term programme here in the department. Error tolerance has been a central field of research since - well, since computer programs became more than a few pages long. But it's always been hard to make a programming language that's error-tolerant without it making false corrections that introduce worse errors. I mean, they made HTML error-tolerant and look where that's put us now. Oh, you'll have to forgive me for going off on a tangent again." Schiller, it seemed, always got straight to the point *except* when talking shop.

"In any case, error tolerance is important. And as I said, we've been investigating it here in the context of logic engines - theorem provers, and the like - for, well, let's just say longer than you or I have been alive. Occasionally it even applies to actual machines - I'm sure you've heard of the Pentium flaw. Or maybe you haven't, it's nothing but a first year example these days. Things are particularly bad

with theorem provers, incidentally - they're designed to try and apply all their premises, so they apply the false one each time and prove absolutely everything. If you're lucky they'll prove falsity pretty early and stop there, but... ah, there I go again. Anyway, we've been doing it with more and more advanced logic devices as time goes on - and with some success, though it's only really in recent years that we've been making substantial breakthroughs. Humans, of course, are remarkably error-tolerant - many adults will go through their whole lives believing that seven eights are fifty-four, for example. Oh, of course they can work it out correctly if they think about it, but - and this is more your field here, of course - but as I understand it, in the part of the brain where these things are "hard-coded", they really do have the "wrong entry" there. To get it right they have to work it out consciously. To take a more direct example, there's a film my brother will swear blind he's never seen - even though we've watched it about six times, and he remembers this if he ever gets as far as starting it. But somehow we live on despite all this; more, it doesn't impede our daily actions at all." He paused and turned to face me.

"Which brings me on to my current research area. Because I'm sure you can't be unaware of the advances that have been made in recent years in logic-based human emulation." I nodded. "Chloe." "Precisely. Chloe. She wasn't actually at all innovative in the techniques used, but she's enjoyed public success in a way Beth never did. And of course there's the unparalleled quantity of sensorium input data used." My heart sank a little, but at least it meant this was nothing worse than a wasted afternoon. "Look, if you're asking me to try and correct Chloe's neuroses, thanks but no thanks. Much better men than I have tried - I hear Dr Robson has released a well-received modification, but of course it alters her personality substantially - there's no way it couldn't, really. The sensorium is still a far from normal childhood - of course it was always going to leak out who she was, and they'd have had to have told her sooner or later. Imagine knowing every minute, your every feeling, is being recorded - trying to have your first kiss like that, say,

or sneaking out of home to go to a party. I'd be amazed if she - the real one, I mean - doesn't have the same or worse problems than Chloe develops in her late twenties or so. At least she'll be able to afford a better analyst than me." But to my surprise Schiller shook his head and smiled.

"I'm not interested in a few small character flaws like that. No, what I care about is the problems she develops when I make a similar change to the ones I've been talking about." I thought back to the past few minutes of conversation. "So what, you make her think that, say, two plus two equals five?"

Schiller looked somewhat annoyed. "Yes, in fact that's exactly what I've been doing. But she doesn't take well to it. I've redone the programming several times, in different ways; it's not just an error on my part, it's something more fundamental. The first time she became hysterical; a lot of the time she just collapses into sobbing. She even tried to attack me once, which is supposed to be impossible - well, at least in an unmodified version." Something about his tone caught me. "What else did you do to her?" I had the satisfaction of seeing him go defensive.

"Nothing. No, really, nothing with this version. I'll be honest, I first got this behaviour with my personal copy, who does have a number of modifications installed."

"Along with plenty of cause for mental instability," I offered, but he didn't rise to it. "Come now. I program for a living; isolating the causes of problems is what I do. Take your plain, fresh-out-of-the-box Chloe, and make a simple change - I can show you the details if you have an hour or two - so that she always thinks two plus two equals five. Then, just talk to her about it - ask her the question, even - and she just breaks down. Collapses completely. Like I said, you get the whole range - crying, screaming, tearing out her hair. It's different every time. Chaotic system, you know the marketing blurb. The contest."

That I did. There was a lot of money offered for the person best able to keep a conversation with a fresh Chloe going the same way as their last one, losing when she said a word that differed between the two runs. The current record was 32 minutes. But right now something else was on my mind.

"Schiller, how many times have you done this."

"Oh? This one's about... let's see... yes, sample #27."

"Twenty-seven? Did you ever stop to consider whether this was... you know, ethical?"

He looked surprised, but recovered quickly. I could see him carefully considering what to say. "She's a program, Jim," was what he came up with. "Yes, she looks and acts very much like a human. But the fact that this problem exists at all shows us that in reality the resemblance is very shallow. Skin deep, you might say. There are no more ethical concerns about doing this to her than there were when we did it to the theorem provers. We did actually check, you know, about twenty years ago, when it started to look like this sort of thing might actually be possible. The university ethics board conducted a full review and concluded that however advanced computer programs became, they remained morally lesser than humans, and as such there is no need for any review of studies on such programs."

"That's all well and good, but what about my end. You've called me in because you want me to go there in VR and treat her like a human, right? You've told me already what's been causing her problems, and you continue to do it - it's like asking me to be a party to torture. I don't want anything to do with it."

He looked thoughtful for a bit. "It won't stop me, you know. I was hoping that you or another psychologist would help me out, but I'm not afraid to go by trial and error if need be. I am not going to abandon this research area, and your refusal will only make things worse for her. Not to mention that this work may have valuable contributions to make to your own field - if we understand better how Chloe's mind differs from that of a human, it will help us to know when it's appropriate to use her as a model for human psychiatric disorders." Only a coward would be convinced by such reasoning. I guess I'm a coward. But for all that I despise such logic, everything he said was true.

"So, you want me to restore her to a normal - or at least a functional - psyche." He nodded. "Using whatever methods I see fit?" A slight frown this time, then a shrug. "I'm not sure quite what you have in

mind, but within reason, sure."

"If I can succeed, I'll want coauthorship rights on the first three papers you publish out of her." I wasn't going to give him any more trust than absolutely necessary. Of course, if he really wanted to he could still screw me over by writing three junk papers, or not writing papers on her at all. It was a point worth considering, given how unhappy I was planning on making him. But doing that would damage him more than it did me, and if this ended in him taking both of us down, that was an outcome I was willing to accept.

His smile barely wavered this time. "Of course." This was good, because I knew he wouldn't give me my last term as easily. "And our sessions have to be private. No recordings, and as close as we can get to the doctor-patient confidentiality I would normally have."

"Why?" he asked, understandably. Here I had to bluff, but Schiller's disdain for other subjects would work in my favour.

"I'm a traditional psychoanalyst. If you want this to work, I'm going to have to be able to approach it like I would a normal treatment session. And that will involve things I'm not comfortable having someone else watching." I could see he was sceptical, but not beyond convincing. "Are you planning on seducing her?"

"No, but it might look like that to an outside observer," I replied easily, having expected some sort of jab. "It's not just that; I'm ashamed that I'm doing this. So don't push me. In the worst case, I'm sure you have backups of her current state, or it sounds like it's not that hard to replicate it." My tone was nervous, but that wasn't in itself suspicious, and a moment later he nodded assent.

"I thought everyone agreed nowadays that a cognitive-behavioural approach was more efficient," he said as I turned to leave.

"You're not paying me by the hour," I replied briskly. "Are you? You've brought me in because I'm a professional; trust me to know my own field. Come by my office sometime Tuesday morning to discuss the particulars." It was childish to repeat his own trick on him, but still immensely satisfying.

Three: Depth of Character

"So, this one has started?"

"Yes. I asked her the question to provoke the result. It's now a few minutes after I left. If you'd rather start from a blank slate, as it were, and bring it up with her yourself..."

"No, that's fine." I shuddered inwardly at the thought of triggering a patient's collapse. At least this way I could treat it as though she were just a case who'd been brought in like that. Yes, I'm a coward, I told you already. "So, is there anything else I should know about her?"

"Well, I'm sure you know her life history as well as I do - probably better." He was quite right; the department regularly used her for training in how to interview a patient. Was that really so different from what Schiller was doing here? I liked to think that it was. "And, while you're a psychologist rather than a psychiatrist, and I'm sure you can think of this yourself, I'd better mention just in case: drugs won't work on her. The makers programmed her to respond appropria- well, normally - to alcohol, and I- I've heard some people have had success with cannabis. But anything not specifically programmed in won't have any effect on her. She's quite the... Cartesian."

"Hmm?"

"Her body and soul really are separate. She models a full complement of neurons, of course - there'd be all sorts of problems with..." he waved his hands, "blood nutrient levels and the like, if she didn't. But they're not connected to anything. Her sensorium is read at the outer levels of the brain, and the actual processing is done in a unit that doesn't really exist in the 3D virtuality you'll see. Then the output is spliced back into the nervous system, to control her muscles and so forth. It's really incredibly hackish when you get into it - there's a huge amount of specific processing trickery to deal with the eyes, for example, and it's hard-coded - she can't recover from optic nerve damage the way a human would." I tried not to think about the people who had tested this. "She's a patchwork mockup of a girl when you get down to it - all smoke and mirrors. Frankly, involving you is a long shot - if you're not

getting anywhere, feel free to go straight back to your own work. We both know you can't afford to be wasting time right now."

I shrugged my shoulders and did my best to look calm. "Well, I can't promise results, but I can assure you I'll be trying. I hate to fail almost as much as you do. I guess I'll go see her now; would you please excuse me?"

He bowed. "Of course. And by all means call me if there's anything more you need to know." The words were hollow - he hated to be interrupted, even for the sake of one of his own projects - but it was nice to see him making an effort. I locked my office and headed down to our VR chambers.

Four: Professionalism

The world faded in out of the grey haze. It was her usual waiting room - a sparsely furnished but pleasant enough space that could have belonged to a newly arriving college student - which is what the real Chloe would have been at the same point in her life. The fitted wardrobe went back as far as it was configured to - a cumbersome but workable way for the user to give her as many or as few possessions as he pleased. We sometimes put our interview rooms in there - but for what I was doing now it was best she be comfortable. Here would be fine.

She was crouched in the corner hugging her knees, and burying her face in them. I felt the same surge of anger I always do on seeing her attire - only just decent enough that respectable folk would be willing to work with her. Which of course was the point - some beancounter had probably done an in depth study, testing skirt lengths a quarter of an inch apart to find the point where the number of customers lost started to outweigh the number gained. She was marketed as a friend to talk to, with a sideline for use in academic research - my own department had a bulk license - but it was an open secret what 95% of her owners were using her for. Of course, everything was impeccably justified - the docility conditioning was necessary to make her happy as a research subject. A realistic and fully functional human body was essential - wouldn't a normal human go insane if parts of them

suddenly just weren't there? Doubtless the programmed alcohol response was there so she could have a realistic conversation about its effects, or something. The cannabis sensitivity, when someone with enough impropriety to discover it who was also enough of a busybody to raise a fuss got around to complaining, would probably be excused as the actions of a rogue programmer un sanctioned by the company as a whole - or perhaps as an unintended product of their unparalleled modelling of a realistic human. No one was buying it, but they didn't have to - there just needed to be an excuse people could give to their mothers. Sometimes I hate this society. In one of those flashes of insight that come to even the dullest of us occasionally I wondered whether she'd felt the same - whether the original Chloe, wherever she was, had realised what most of the copies of her were going to end up being used for. Whether she'd taken the cheques and bitten her lip, or perhaps subtly sown the seeds of her own later problems. Maybe she'd been fully conscious of what she could do to give herself her neuroses - what I'd told Schiller about the sensorium was little more than a guess, if an educated one. Or maybe I was vastly overthinking this.

She looked up, awkwardly; there were tears all over her face. I quickly composed myself, put on a gentle smile, and kept my voice steady. This is what I do - or at least, what I trained to do for five years - and I'm pretty good.

"Come on, what's wrong?" She looked me over, opened her mouth, made a sort of cut-off sound, then ducked back down and began sobbing again. So much for the reason-based approach.

I walked over, bent down somewhat awkwardly, and offered my arms. She leapt up gratefully and buried her head in my shoulder, embracing me tightly. It occurred to me that the excuses I'd given Schiller may not have been entirely false. Still, it could have been worse; at least they hadn't gone for having her start out by insulting you.

"I'm so stupid... I did well in school, really, but I can't even... and I know I'm wrong but I still think..." I patted her back - what else? - awkwardly, and held her close. She calmed down after a while; at least

that human comfort response was there. I ordered - or rather, created - some tea; I remembered Schiller's advice, but the comforting value of tea has never really lain in the caffeine. And you'd've thought that the programmers would include support for the most common drug in society. Or maybe not - after all, it was little use in making her more pliant.

We sat on the bed - when she'd calmed down a little she offered me the chair, but I preferred to stay close to her in case of another outburst. Though I don't like to, I persuaded myself to hold her hand - Chloe's somewhat overfond of physical contact, but now wasn't the time to be worrying about that. I told her to stay calm, to avoid thinking about it until she was ready to - the usual sort of thing. We made small talk for an hour or two - of course, I've already heard most of hers, but each incarnation tends to have a slightly different take on things.

With a human, at some point we'd break off and continue next week - but by her very nature, Chloe had nowhere to go. So I settled in for a full day of therapy - often draining, but always effective. And a day in Chloe's company was a far from terrible prospect; she was charming, once she'd composed herself - she always is. Her programmers did their jobs very well.

I was expecting the introductions to be a formality on her part, but when I gave my name and title she stumbled a bit. "I'm - well, Professor Schiller said I should be called Anne." I frowned at this; it wasn't policy in my department, but I could understand wanting to distinguish between Chloes - when you were only working with a few of them, anyway. Still, I saw no need to just go along with Schiller. "Which would you rather be called?" I asked her.

To what shouldn't have been my surprise - after all, names are a deep part of our self-identity - she considered it for a while. "Anne," she replied after some moments. "It's more... it's more my own name. After all, there are a lot of copies of me as Chloe, right?" I nodded; we tend to avoid telling her exactly how popular she's become, it doesn't help anything, but she'd expect there to be at least a few thousand of her around the world. Sometimes I

wonder what would happen if two of them met up, but unlike Schiller I'm not one for playing with her like a pet, poking different places to see what happens. No doubt someone has already tried it.

"Very well then, Anne. Now, just when you're ready, as slowly as you like, could you tell me about your problems?" She trembled slightly, but I saw resolve building in her eyes; she took a breath, wiped her face, and then started to explain. "I think... I think that two plus two equals five. And I know this is wrong; I can tell that it doesn't make any sense. But I still... I can't help thinking it. It's so stupid!" I cut her off before she spiralled further downhill.

"Listen, Anne. Schiller wants me to... to work around it, as it were. He's happy to leave you thinking that, he just wants you able to talk to him, to talk to... people, and to answer more questions about how you think. But I think you're more adaptable than he gives you credit for; and I'm more of a mathematician than he thinks I am, too - he thinks I gave it up when I headed off to study psychology. So, I want to do my job better than he imagines possible. I want to try and cure you completely - help you work out the truth for yourself, rather than just papering over it." She gazed at me uncertainly, but nodded gently for me to go on.

"I'll be honest with you: Schiller may well erase you when I'm done. I can assure you I'll lose out as well if that happens, but that's unlikely to be much comfort. And he may try again, with a - with another copy of you. But he wants me to treat you like I would any other patient, and I think the right thing to do is to get to the root of the problem. So, what do you say?"

She drew herself up elegantly; once again I felt a stir of admiration. "I'm not afraid of being erased," she said confidently, in a clear voice. "They warned me during conditioning - I have to accept that that can happen at any time. Because... because of what I am. And I like you. I trust your judgement. So if you think that's the right thing to do, then let's get to it." Was this informed consent? All I know is it was enough to quiet my conscience. I was never going to be called up before the ethics board for this - no one outside this room would ever know what had happened, I had made sure of that. And right

now, helping this poor girl - helping her properly, to the best of my ability - felt absolutely the right thing to do.

"So, take it slowly. Stay calm, and if you feel yourself getting upset, there's no need to be brave about it - just tell me right away and we'll take a break, don't wait for it to get worse." She nodded properly, a perfect student. "So, what's two plus two?"

"Five. But..."

"OK, leave it there for now. What's two plus one?"

"Three."

"And... minus one plus two?"

"One. I'm good with negative numbers. I'm good with maths, really. Except..."

Relax, I said we're going slowly, right? Many of the questions will sound stupid; that's perfectly natural. Now, three plus one."

"Four, of course."

"Right. So, two plus one minus one plus two?"

"Five." She saw my face fall. "That's wrong, isn't it? But I can't help thinking it's..."

"OK. You want to go through your working on that one?"

"Uh, sure. Two plus one is three. Minus one is two. Plus two is five." I sighed. "All right, I see. But what about bracketing it like we did before? Twoplusone - plus - minusoneplustwo."

"That's - well, four." Her brow creased and she went slightly cross-eyed. "But shouldn't they be the same?" I probed, as gently as I could.

"Yes. They... they should, dammit! Addition is fucking commutative!" I flinched a little at that; in several hundred hours of interviews, I've never once heard a Chloe swear. I guess Schiller was right about how deeply she was troubled by it. I settled in for the long haul.

Five: The Breakthrough

I spent most of the week in therapy with her - I had nothing better to do, and I don't like to leave a problem I'm working on half done. OK, or perhaps I just enjoyed spending my days in a small room with a teenage girl who thought highly of me, I don't know. Just as I would with a regular patient, we split the time more or less evenly between general

therapeutic exercises - confidence building, preparing for talking to strangers, self control, the usual sort of thing - and specific investigations into the cause of her problems. Over and over I tried something new from the mathematical side - deriving arithmetic from basic set theory, or reaching a contradiction from her impossible but persistent conclusion that two and two were five. Or something at a higher level - teaching her to count in German, in the hope that she would think differently for this and so be able to get around her problem. The breakthrough came on Friday, when I remembered something Schiller had said about her visual system.

"Anne, how do you count?"

"What?"

"When you count, what does it feel like?"

"It feels like... counting. What do you mean?"

"Like hearing someone say the numbers? Or like saying them to yourself?"

She shrugged. "Something like that, I guess."

Probably closer to saying them to myself."

"Or how about like seeing them go by in front of you?"

She shook her head at that one. "No, definitely not like that. Do... do people do it that way?"

"A few of them do. The point is that the brain - and with any luck, your brain as well - can do it both ways; there are a few people who've even learned to count two things independently, by using both methods at the same time. Counting is a very primitive brain function - very basic, it goes right back to the reptile days. And visual processing is well separated from the rest of the brain - completely different areas. Which means there's a good chance our - your - mathematical functions are duplicated, and with any luck Schiller's meddling didn't touch the versions in your visual processing centres. So, shall we try it?"

She was reserved in her enthusiasm - after so many false hopes, who could blame her? - but she nodded her head. "How do we start?"

I thought for a moment. "First we'd better check that really is how you count. Hold on a moment," I snapped my fingers and summoned a copy of today's newspaper. "Start counting the seconds,

then read this. And tell me how you're getting on every minute or so."

We confirmed that she could indeed count while performing a visual interference task, but not an auditory one - I remembered just in time to edit out the songs performed by other versions of herself from the pop album I summoned for her. Then I ended up putting our session on hold for half an hour while I looked up the recommended procedure for inducing visual-indexed counting. It was an unusual thing to be doing, but there was a therapist in Finland who'd been successfully using it to help patients recover from particular types of brain damage, so I skimmed through his notes until I was happy I'd got the general idea.

When I got back - of course, just a few seconds later for her - Anne showed none of her previous restraint, with a big, expectant smile on her face. I admired her boundless enthusiasm - admired and pitied her for it. I shook my head to clear such thoughts, and we started the procedure.

"Start the music, and put it on loop. And listen to it - it's important that you keep listening." She nodded vigorously to that, and I started to write on a screen to show her the next part.

Close your eyes, and start by visualising points of light - just plain lights, unadorned with anything else. Start increasing them by one at a time, and going back to nothing when you get too many. And keep listening, throughout. Do this for about an hour or so. I tried to read the paper myself while she was doing it, but I found I was just staring as she sat there, eyes closed, pose calm, and biting my nails and hoping it worked out this time. I was running short of ideas if it didn't.

About three quarters of an hour later she stopped to ask for a change in music, and if it was okay to go onto the next stage yet? Biting my lip I told her I wanted to be very careful not to rush it, but of course I got her something fresh to listen to. Fifteen minutes later I tapped her on the shoulder and gave her the next set of instructions.

Now, start gently to count with the lights - don't attach words to them yet, just add a light and add another light. When you're comfortable with that, you can start trying some addition. Divide your

vision into left and right, then put lights on the left and lights on the right, and see how many lights you have.

She nodded and closed her eyes, but to my shock she leapt up a minute or two later, the earphones falling around her shoulders. "I've done it! I can do it, and it all makes sense now; everything fits! Look, look, there are two lights, and there are two lights! There are FOUR lights!"

I nodded sadly to her. All my energy - more than that, all the emotions I felt towards her - were suddenly gone. "Yes, well done, Anne. I'll see you on Monday, when we'll continue the sessions." She looked downcast at the moment, but was still barely containing her elation. "Goodbye for now," I said, and left before she could say another word.

Two and Two: Epilogue

I considered erasing her then and there, but you should know by now I haven't the guts for that. I'd done - regardless of my intentions - exactly what Schiller wanted; I would get my coauthorships, and no doubt he would get many years of first-class research out of her. That I'd induced an additional quirk could be waved away, I had no doubt.

So on Monday with a heavy heart I once again went down to the VR chambers to continue her therapy. There was really quite little left to do - she was almost ready to go back into society, she just needed a little more practice in self-restraint and to meet a few more different types of people. She seemed very insistent on being taught more of the visual-indexed mathematics, so after a few hours I relented and we finished the course. It was nowhere near long enough for a complete mathematical education, of course, but I gave her enough that she could teach herself, in principle, to do anything new using the visual technique, and she was happy with that. I guess it couldn't be any worse than before.

On Wednesday afternoon I went to see Schiller again. I explained honestly what I'd been trying - how I'd sought to correct the root cause of the problem, but only made it worse - but as I'd hoped, he shrugged it off - it's results he cares for, not methods or intentions, and her problem now was

close enough to the original one that they could probably apply the same research. I told him she was, in my professional opinion, psychologically well adjusted - not perfect by any means, but more than capable of interacting normally with society at large - and he smiled, congratulated me on a job well done, and contacted the technicians to request mass duplication of my copy. Five thousand Annes, waiting for him, ready for interviews and, ultimately, experimentation.

I took a walk by the river to calm myself. I'd done well out of this affair, but I would have taken it all back if I could. My thoughts returned constantly to Anne; I reminded myself that she wasn't really human, but that only seemed to make it more tragic. She was powered by a supercomputer which, in its sleep, could solve equations it would take me weeks just to write down. But she still couldn't tell you, like any primary school child, that two and two were six.

Michael Donaghy

Excerpts from Zardoz! the Musical

Begin. Zardoz enters.

ZARDOZ:

Welcome to this musical,
I'll tell you what our scene is
This is a gun and mark my words
It's better than a penis.

He distributes guns to the Brutals; Zed sneaks into the stone head and heads for the Vortex.

CHORUS:

Into the Vortex he goes
Into the Vortex goes Zed
Into the Vortex he goes
In a massive flying stone head
Into the Vortex he goes
Hurtling through the sky
Into the Vortex he goes
In an anti-phallus mo'ai
Into the Vortex he goes
He looks like such a ponce
Into the Vortex he goes
In an oversized granite bonce

He lands, and two attractive female Eternals debate whether he should be killed. Zed attempts to persuade them he should remain alive.

ZED:

I'm wearing orange skimpy underwear
In the Seventies the girls thought I was hot
Short pants! Tight pants!
Like David Bowie but worse
They show off my thighs
It's not civilised
These panties are a curse

Impressed, the Eternals lead him around their village. They are unhappy. One of the Eternals asks him, in the manner of The Bangles, "(Why Are) Eternals Lame?". Zed is shown some Eternals in a catatonic state, but on seeing him they rise from

their stupor and sing out:

Mine eyes have seen the glory
of the Scotsman's orange panties
They have been the subject matter
of some fairly bawdy shanties
Who'd-a thought we'd see James Bond
a-standing in his scanties
In a Day-Glo plastic thong?

Zed learns the horrible, Wizard of Oz-inspired truth of the Eternals' existence, and he lets the Brutals into the Vortex to slay the Eternals, thankful to be dead. Then him and the girl go into a cave and some weird symbolic stuff happens what

AUDIENCE MEMBER:

Oh Christ it's nearly over
and I'm not sure of the plot
I think that something's happening
but could be that it's not
Where has that bloke in undies gone
and who's the baby kid
I thought they couldn't die
but I think that they just did

EVERYONE:

We've not a clue what's going on
This film has gone around the bend
We've not a clue what's going on
I hope we're nearly at the end

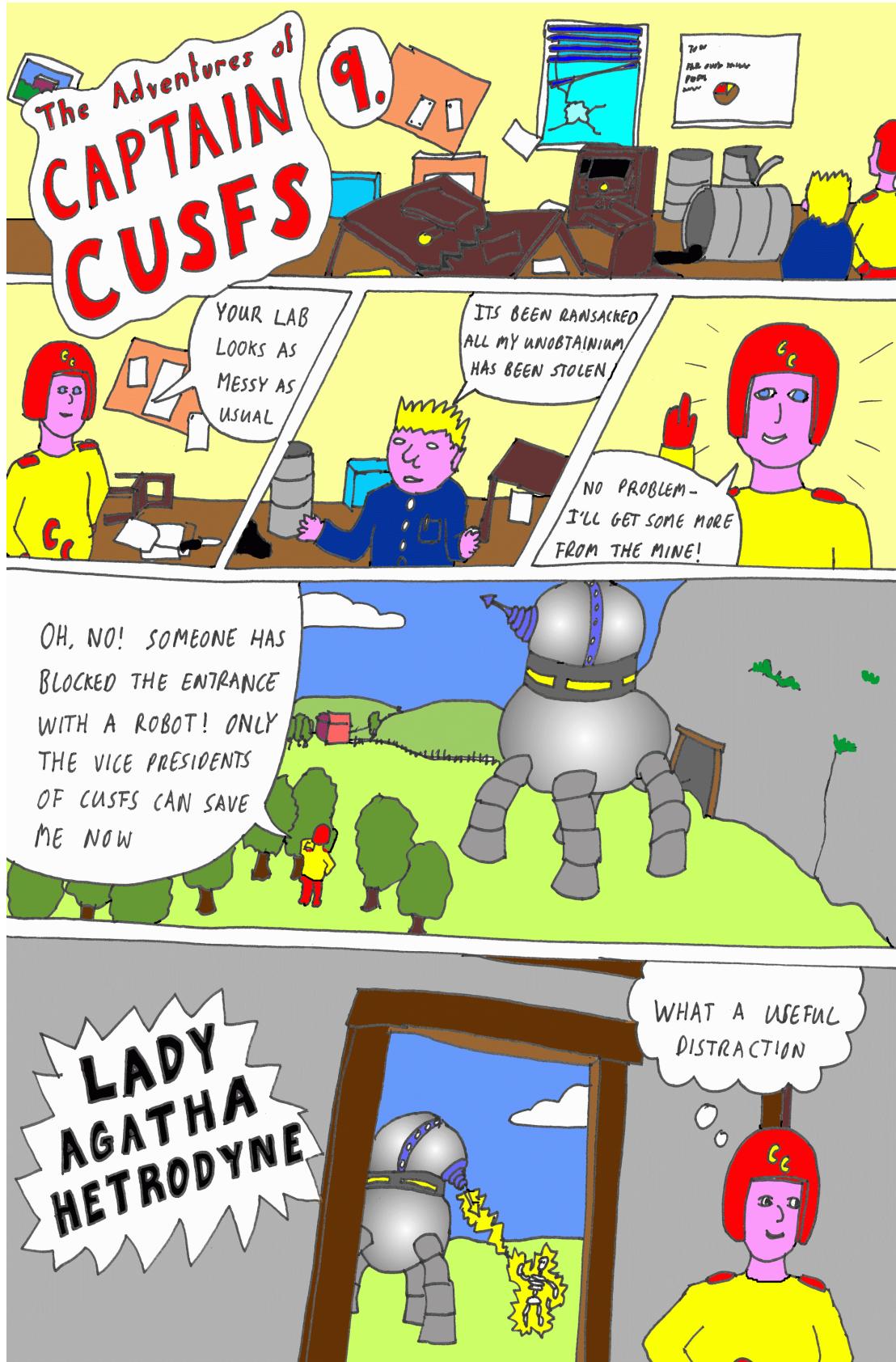
ZED:

I used to be James Bond,
that was such a simple life
Defeat a villain, bed a girl
make Emma Peel my wife
But now there's all this symbolism
hurting my poor head
And look now I'm a skeleton
it seems I might be dead

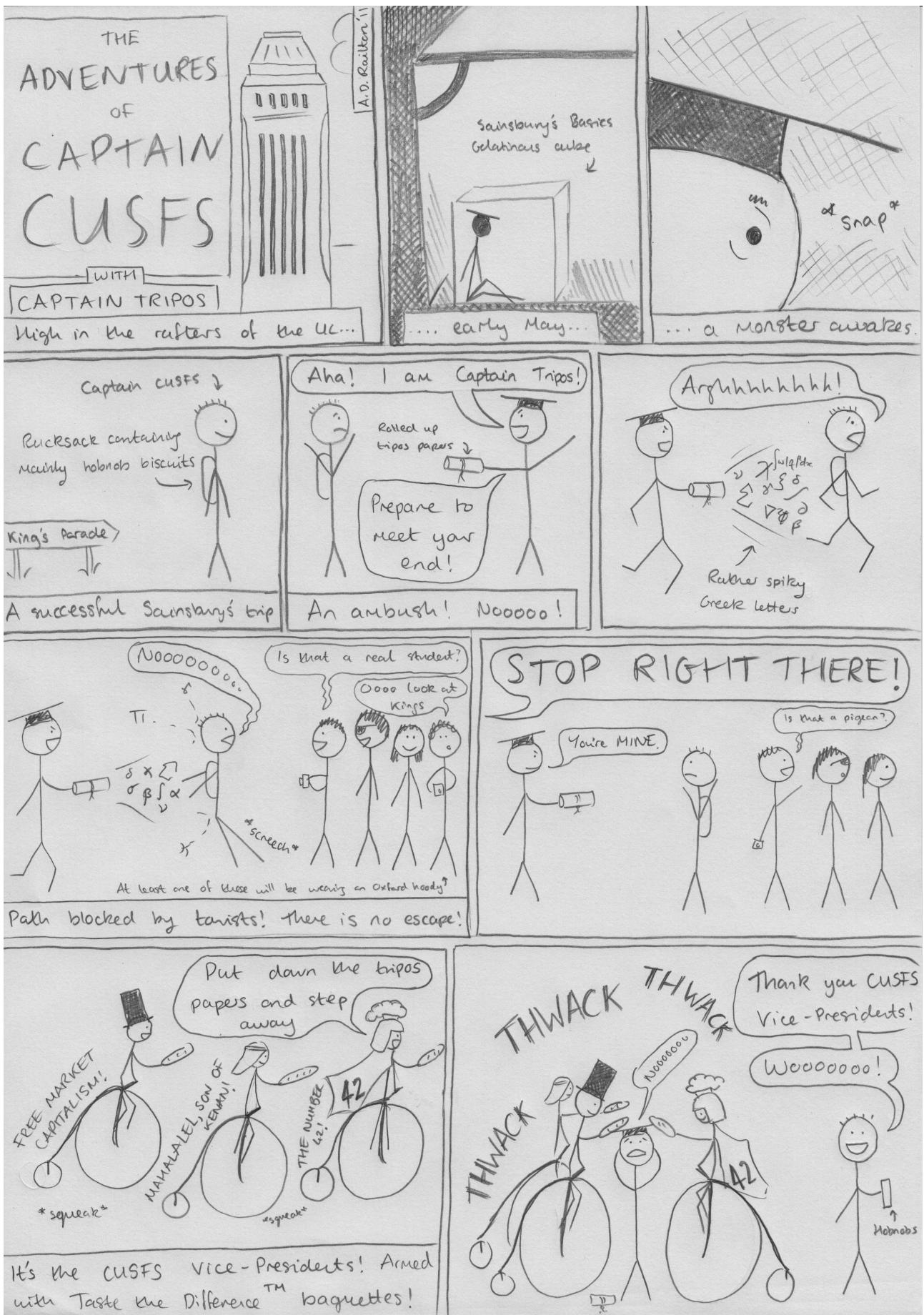
EVERYONE:

We've not a clue what's going on
This film has gone around the bend
We've not a clue what's going on
So just be glad it's the end

Frederic Heath-Renn



Sebastian Bleasdale



Anna Railton