

TWO DAYS IN THE LIFE OF PROF. ORFFBARON

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CHAPTER 1: IN WHICH OUR HERO'S FORTUNES SINK

A familiar beeping woke Prof. Orffbaron. Reflexively, her hand struck the alarm clock. It was the first day of British Summer Time, and all the birds were singing. Apart from a global pandemic, all was right with the world. She stretched out, enjoying an unusual sense of space in the double bed. The first job, of course, was to change the clocks. But which way? After 5 minutes spent with a limiting case of the Lorenz transformation, reflecting for the n -th (or was it perhaps the $n + 1$ -th?) time on the inconvenience that co-ordinate changes are necessarily contravariant to base changes, she confidently reset the clock. It read 8 a.m. precisely.

She turned on the radio and heard the 10 a.m. bulletin. A familiar throbbing sensation developed in her head. Irritated, she forced her way through the morning routine. Ermintrude, luxuriating in her vivarium, seemed to have put on weight. Maybe just one dried frog today, she decided. Stocks had to be conserved. The hamsters, products of a long program of natural selection to produce an animal that always looked adorably cute, while riven inside by inexpressible currents of deepest torment and existential angst, raced in their wheels. It mattered only that they would be fed in thirty minutes. She reset the time on the automatic feeder to 10.15 a.m and checked the supply of cabbage leaves.

Now, what to do today? She had to schedule an online session with her students. How long could this trivial administrative chore take? Two hours later, having resituated the flat to Gabon (Figure 1), she sat back, scraping the sweat from her over-heating laptop. Her mood had not improved. Maybe a quick email to IT support would help? She carefully itemized the five bugs she had found and sent it into the ether, reflexively deleting the passive-aggressive response from the help-desk software. The epidemic newsletter informed her that the University had her best interests at heart and that actions would be taken. Moreover, best practice would be followed and a full consultation leading to further actions would shortly be underway.

It was time for lunch. And then, who knew? Maybe on a Sunday she could justify a break from administration? She had misinterpreted a student question as asking something interesting about the linear complexity of the bitwise product of two linear keystreams. Yes, there was much to think about. Perhaps it could be combined with a walk? Indeed.

Date: July 1, 2020.

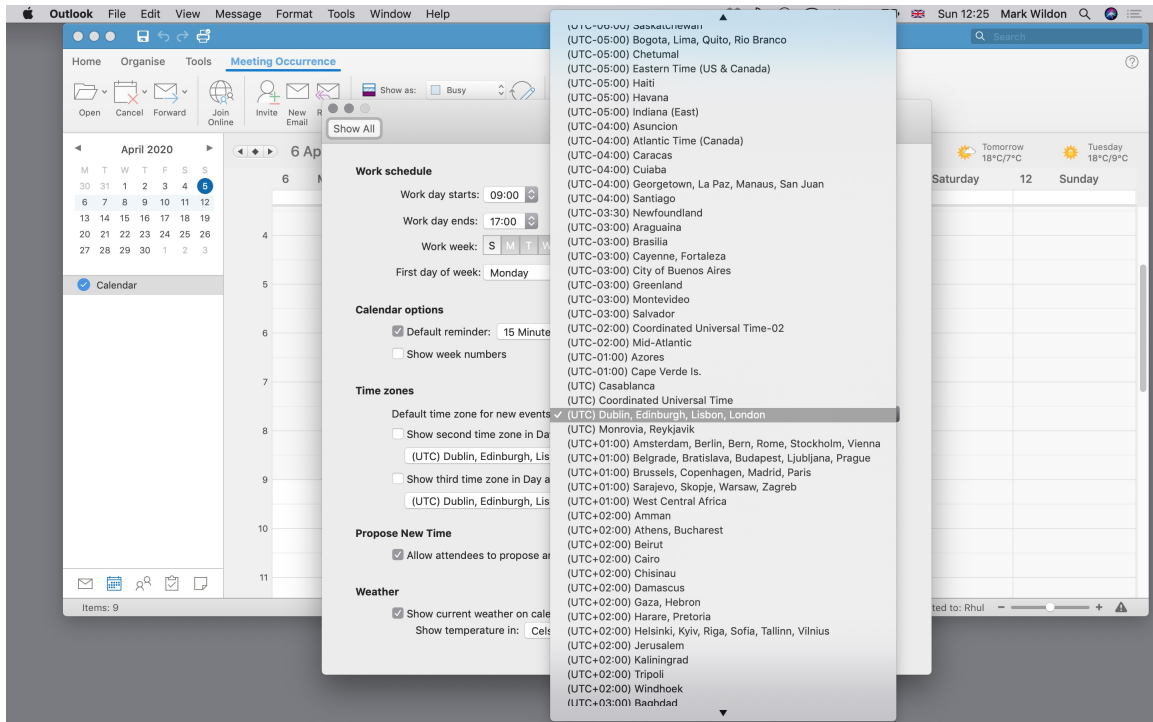


FIGURE 1. In which our hero learns that BST is absent from the world as understood by Microsoft.

She checked her watch and stepped out of the door. Blossom cast intricate shadows in the warm April sunshine. The roads were deserted, the usual noise from aircraft absent. Down the road, through the wood, across the common, around the field and up by the monuments she walked, happily reducing the problem to an obvious fact about tensor products of fields. Maybe not one for my course (she reflected, not for the first time, on the inutility of thought in the face of undergraduates) but never mind, she was content.

‘Excuse me miss.’

She looked up, astonished. What was this? A human being within two metres? She recoiled. Two black shapes resolved themselves into the ominous form of a pair of Police Community Support Officers. Had they nothing better to do?

‘Yes?’

‘Going for a walk are we?’

‘Something like that.’

‘Something like that.’ PCSO-A raised an eyebrow at PCSO-B. ‘Something like that the lady says.’

The pair arranged themselves into intimidatory-blocking-formation-C from the training manual.

‘And when did you leave?’

‘12.30pm precisely. I know because I checked my watch.’

‘You’ve been out almost a day then.’

‘What?’

‘It’s just gone noon. That’s far too long for exercise.’

‘Do I look like I’ve been out all day?’

PCSO-A nodded smugly at PCSO-B. ‘Lady admits she looks like she’s been out all day. Better take a photograph.’

‘This is absurd.’

‘I’m sorry madam, but I’m going to issue you with a penalty notice. That’ll be 30 pounds please.’

The professor’s brain throbbed angrily. ‘I don’t have any cash.’

‘No problem, you can pay tomorrow. It doubles every day you refuse to pay.’

A witty comparison with the epidemic flashed across the professor’s mind. Pearls before swine . . . , she decided. ‘I’m not paying 60 pounds.’

‘You mean 120.’

‘I’m not paying 120 pounds for going for a walk. Come on, the Magna Carta was signed just down that path.’

‘Never heard of her.’

‘It.’

‘Good afternoon madam.’

The black-clad forms walked off at a pace finely calculated to infuriate anyone watching.

Blood boiling the professor settled down to an afternoon of administration. Action would be taken. Consultations would be conducted. Further actions, which were highly actionable, would be actioned. Feedback would also be actioned and, let no one doubt, best practice would be followed. Run hamster, run hamster, run, run run. The throbbing sensation she had been living with all day redoubled.

At 7 p.m her train of non-thought was interrupted by the sound of a key at the front door and footsteps in the hall and in the kitchen. A familiar voice said ‘You might have started dinner.’

‘I’m sorry, Martin, I wasn’t expecting you back for an hour.’

Her partner sighed. ‘It was a long shift. The hospital’s understaffed.’

‘You want a round of applause?’

‘Ha ha. I’ll start dinner. I got all the vegetables left in the supermarket.’

‘What are we having?’

‘Kale. Two kilos each.’

‘Give it your hamsters.’

After dinner, the professor collapsed in the sitting room. A Guardian crossword. Thirty minutes, and three minor endorphin rushes later, she had

three clues dispatched, and a new respect for the setter, aptly enough named ‘Serpent’. Martin stood in the door.

‘Two of my hamsters have starved to death.’

‘I checked the feeder this morning.’

‘They weren’t fed, it’s still full. And I can’t even see the third.’

The throbbing sensation became overwhelming. ‘The third?’

‘Gustave. He was my favourite.’

‘I’m sorry.’

‘I’ve had enough. I’ve packed a change of clothes and the laptop into a suitcase.’

‘Where are you going?’

‘I’m not going anywhere. Your clothes, your laptop.’

‘Oh.’

‘And you can take Ermintrude.’

‘She needs 20 degrees at all times.’

‘Come on, she’s cold-blooded. She’ll perk up later. I’m not having her slither around in that disgusting tank any longer.’

‘Where do I go? Disease stalks the land.’

‘That’s not my problem.’

‘I’ve got a splitting headache.’

‘Take it with you.’

Soon after this exchange, Prof. Orffbaron heard the front door click behind her. Trundling her suitcase, she walked into the road, Ermintrude worn cosily around her neck. Could this set a fashion? Maybe things were not so awful. A new life, maybe. It started to rain. The professor realised she had never owned a mobile phone. Where to go? Her campus office? Just for one night, no-one would notice She reached into her pocket and felt a disturbing absence of her ID card. Could life get any worse? A speeding car sloshed a torrent of water across her shoes. Yes, it could. She squelched miserably down the road. Halfway to the village she realised that the obvious fact about tensor products was false.

Her head was being used as an anvil by a demented blacksmith. The professor prayed to a god in which she didn’t believe for respite. With remarkably little delay, and to her gloomy unsurprise, a lightning strike promptly incinerated an adjacent tree. An apologetic rumble of thunder followed. She paused briefly to warm herself by the fire . . . every cloud she reflected. The snake stirred sleepily around her shoulders. A lump near its tail felt horribly like the missing hamster.

CHAPTER 2: IN WHICH OUR HERO’S FORTUNES RISE

Prof. Orffbaron trudged towards the village, her suitcase catching on every crack in the pavement, her headache stabbing afresh on each step. Despite

the insistent rain, her forehead burned. And what was this hairy thing round her neck? Looking down, she saw garish purple and orange stripes. Or was that the headache? Whatever it was, she wanted it gone. One scratchy wrench later, she had her old college scarf balled in her hands. She couldn't even remember when she'd last seen it, let alone willingly worn it. (Had she ever willingly worn it, she wondered?) Something was wrong. Something was very wrong. Her vision swam. She was so hot. If only she could sit.

She had reached a bus stop. Maybe a few minutes in the shelter would help. She collapsed onto a bench, skilfully calibrated to make the life of any rough sleeper a misery within at most five minutes. Normally at such a moment she would have spent a few moments reflecting on the Poisson process and the inter-arrival times paradox, but her head hurt too much even for that light diversion. All she knew was that something was terribly wrong. Ermintrude. That was it. Where was Ermintrude? She had lost her swamp adder.

A new wave of pain and anguish engulfed her. She shuffled on the inhospitable bench and admired the finely-tuned inhumanity of the designer. Lying down was impossible. Instead she buried her burning head in her hands and listened to the pounding rain. If only she could find Ermintrude. But Ermintrude was gone.

An interminable agony later, she heard a car. No, something larger. Whatever it was, it was slowing down and stopping. It was a bus. Some strange blue paintwork she didn't remember (no doubt it was yet another corporate rebranding) but anyway, here it was, a Number 8 bus. She remembered using it once in the opposite direction: the 10 mile trip from the airport had taken only slightly longer than her flight from Helsinki. The door swung open invitingly. Well why not? There certainly wasn't much point staying here.

Immediately she felt a little better. The bus was pleasantly warm and she was the only passenger. The professor began to doze, slipping in and out of awareness in the easy manner of a non-expert attending a overly technical post-lunch seminar. Her headache faded from the agonising to the merely intolerable. The bus sped through the night, apparently feeling no need to stop. It seemed like only a few minutes before she was outside the terminal. Only one desk was lit. Behind it was a familiar looking man. Could it be? Yes, there was Andrew, the chubby-cheeked student from her third year cryptography course who sat at the front and was so helpful when it came to distributing problem sheets. It wasn't his fault that he looked just like one of Martin's hamsters. He greeted her cheerfully.

'Let's get you checked in then Prof. Orffbaron.'

'I need to get a ticket,' she said.

'No problem professor, where are you going?'

‘I don’t know,’ the professor admitted. ‘Where can I go?’

Andrew did not seem at all surprised by this directional uncertainty. ‘All the European flights have already gone. The remaining flights are to Africa and the Middle East.’

Not Dubai, the professor felt. Anywhere and anything but Dubai. The corporate soullessness of the three hours she’d once spent there on a change-over had been enough for a lifetime. And would she even be let in without a visa? ‘Where in Africa?’ she asked.

‘Only flight still to depart this evening is to Libreville.’

Gabon. If she could just get to Gabon everything would be okay. In Gabon, Ermintrude would be in her natural habitat and Microsoft Teams in its preferred timezone. Yes, clearly she must go to Gabon. In Gabon she could sit down and think properly. In Gabon the air would be clear, everyone would leave her alone, there would be no administration and at last she could do some work. Gabon was perfect.

‘Yes, Gabon’.

‘We’ll have to hurry up. I’ll take you the fast way through security.’

It quickly became clear that while Andrew’s mathematical career had never threatened to take off, he was in his element as airport ground-staff. In quick succession there was another man, then several women, and then a very serious looking woman wearing some kind of peculiar headscarf and waving a metal detector. At a distance she heard the serious looking woman making some kind of fuss, but Andrew was sorting it out. He was giving her a passport — yes hers: how thoughtful of Martin to pack it. Or maybe he just want her to be as far away as possible? Anyway, here was another man propelling her down a long brightly lit airbridge. She was in the plane.

A smiling woman gave her a glass of fizzy water. The professor gulped it down. There was a safety briefing and something technical she couldn’t quite follow about oxygen masks. Whatever it was, it seemed to be terribly important to the smiling woman. The professor nodded agreeably, hoping the smiling woman would go away, but she just kept on smiling and fussing and doing something strange with the soda siphon and the drinks trolley. All the activity made the professor exhausted. ‘I don’t need another drink’ she tried to say, but all that emerged was an incoherent croak. Darkness crept around the sides of her vision and the smiling woman decohered into a mass of white and blue pixels, like an 8 bit computer game seen too close up.

When Prof. Orffbaron came to, the plane was making its final descent. She felt almost refreshed. She seemed to be first off the plane. There was no queue at immigration. She gave her passport to the neatly uniformed officer.

‘Purpose of visit?’

The professor hesitated. She had only one goal in mind.

‘Mathematics.’

The man smiled briefly, and flicked through the professor’s passport.

‘I’m afraid you don’t have a visa, Madam.’

‘I left in a bit of a hurry.’

‘I’m sorry Madam, but we can’t just admit everyone who arrives at our borders. Particularly not now. I’m going to have to search you. Please empty your pockets.’

The professor shrugged: years of conference visits had resigned her to any indignity an airport might choose to inflict. She turned over her wallet and keys, and then, scrunched up at the bottom, a forgotten piece of paper. The officer inspected it.

‘It appears Madam that you are wanted by the police.’

‘What?!’

‘It says here you have been found guilty of unnecessary walking and must pay a 30 pound fine, doubling every day.’

‘Oh that. That was just a misunderstanding.’

The officer looked intently at the professor. ‘Are you sure that’s what you want to say?’ The professor recognised her own supervisory style. Clearly something else was required. But what? Her brain was foggy and the humid air made her feel half asleep. Come on, she muttered to herself. The officer began to frown. Then inspiration struck.

‘I want to claim asylum,’ she announced.

The officer gave an infinitesimal nod. ‘What did you say was your occupation?’

‘Pure mathematician.’

Another tiny nod. ‘Indeed, we in Gabon know that it is a subject not given the respect it is due in your country. Where are you employed?’

The professor answered, then added bitterly ‘But they’ve kicked me out of my office. I had to leave all my books behind.’

‘So you’re working at home?’

Again the professor answered truthfully. ‘I got chucked out of my flat 12 hours ago.’

‘And what was the last piece of mathematics you did?’

The professor abhorred deceit. ‘I can’t remember. I’ve done nothing but solid administration for six weeks.’

There was a long pause. The professor felt her fate hang in the balance. At length, the officer said ‘It appears Madam that you have a *prima facie* case for mathematical asylum.’

In the ensuing delay the professor was deprived of her luggage and made to sit on a long sequence of institutional chairs of fractionally decreasing degrees

of hardness. At length a woman with an officious air entered, holding the professor's passport.

'Prof. Orffbaron' she said, dwelling on the title. 'I am the chief immigration officer. I'm afraid we get many imposters here. Many people think all they have to do is turn up and claim they are pure mathematicians, and we will welcome them with open arms. I'm going to have to ask you a few questions.'

She riffled through her notes.

'How many 9s are there in the decimal form of all the numbers between 1 and 99?'

The professor felt a quick answer was required. '19', she said.

'I'm afraid it is 20.'

A familiar throbbing sense developed in the professor's head. Did they seriously think she could be tested by such trivia? She retaliated by double counting. 'Oh yes: nine single digit numbers and ninety with two digits, so 189 digits, and counting nine zeros, it follows by symmetry.'

The chief officer huffed. 'Where did you do your undergraduate degree?'

The professor confirmed the universal truth that anyone who has been to Cambridge will feel compelled to admit this fact within ten minutes of making any significant new acquaintance. To make doubly sure she even mentioned the name of her college.

'And what are the colours on the college scarf?'

'Orange, purple and turquoise.'

The chief officer smiled thinly. 'I remember it as closer to aquamarine . . . , still let us proceed. Stand up please.' She ripped open a fresh pack of whiteboard pens and gestured to a wall. 'Kindly state and prove the Snake Lemma.'

The professor began the traditional diagram, and immediately felt that something was out of place. Yes, thick black ink was flowing smoothly from the pen's nib. She was sure it would be visible even from the back of a large lecture room. Could this miracle be some special property of the Gabonese climate? What paradise was this, where complete strangers gave out fresh whiteboard pens to asylum seekers? Enough. There was mathematics to be done. She started at the kernel in the top right and happily pushed and pulled her way through the maps until she had a well-defined element of the cokernel in the bottom left. In honour of Ermintrude she called it e . (See Figure 2.)

'Hmm . . . ' said the woman. 'I see you compose your maps on the right.' She turned to her notes and made an ostentatious tick. 'And why is the connecting map a module homomorphism?'

The professor sighed. Surely the chief immigration officer should know it was traditional to omit this (vital) check? Anyway, wasn't it just obvious

$$\begin{array}{ccccccc}
 & & & & & c \in \ker h & \\
 & & & & & \downarrow & \\
 * & \longrightarrow & b & - & b' & \longrightarrow & 0 \\
 \downarrow f & & \downarrow g & & \downarrow g & & \\
 e & - & e' & \longrightarrow & bg & - & b'g \\
 \downarrow & & \downarrow & & \downarrow & & \\
 0 & & 0 & & 0 & & \\
 \downarrow & & \downarrow & & \downarrow & & \\
 c\delta = e + \ker f & \longrightarrow & & & & & 0
 \end{array}$$

FIGURE 2. In which our hero proves (most of) the Snake Lemma.

from the existence of pullbacks? Could she risk a joke: ‘Exercise for the listener’? Best not: immigration officers were not widely known for their subtle sense of humour. She’d just do it. She returned to the top-right, applied a ring element to the kernel element, and, to her relief, after a quick push, pull, push, pull, push, saw it pop out next to e at the bottom-left.

She felt herself breathing more easily. She turned away from the board. The chief officer was already on the phone. ‘Yes, off by one ... She was fine on the Snake Lemma until the bit you told me to watch out ... Yes, that’s just how she sighed ... No, she did it for modules ... Yes, multiplication on the right. ... Of course we looked her up on MathSciNet.’ There was a long pause, and then ‘Okay, we’ll go on that.’

The chief officer turned to the professor. ‘My colleague confirms my view that your behaviour is most characteristic of a professional pure mathematician.’ She sniffed. ‘I am going to grant you interim asylum on condition you teach a postgraduate algebra course at the University of Libreville. The topic will be ...’. She paused, a faint smile playing around her lips. Then, more curtly, ‘The topic will be of your choice. Someone from the University will be over soon to help you settle in. Welcome to Gabon, Prof. Orffbaron.’

CHAPTER 3: IN WHICH OUR HERO CONFRONTS ULTIMATE REALITY

A few hours later, Prof. Orffbaron sat at a single table in the refectory, unwinding after her first lecture. Her proof of the Jordan–Hölder theorem using the butterfly lemma had gone well. The students were attentive, followed her English with ease, and while no-one laughed at her joke, several students had nodded politely to show that they understood an attempt at humour had been made. There was even an intelligent question at the end on the analogous result in a triangulated category. And best of all, not a single off-by-one error.

She was aware that she had some serious unfinished business. First of all, her battle with Serpent. Choosing a down clue stretching the length of the crossword she read ‘One in Mersey Tunnel taking ecstasy on route for exit’s direction (9,4,7)’. Thanks to Martin she knew the answer. The ‘C’ beginning the second word gave her the start of ‘Deeply asleep, butterfly loses heart (4)’ and, as a seasoned hand at cryptic crosswords (see Figure 3), she quickly wrote in ‘OMA’. Sensing a theme (how she hated themes — it was just setters showing off) she quickly continued with ‘DEAD’ for ‘Identical version of Diehard that’s periodically screened is no longer extant (4)’ and ‘DNR’ for ‘Express desire to pass on seeing donor’s odds? (3)’. After a brief struggle with ‘End project at bathtime? (4,3,4)’ she noticed the ‘v’ from ‘LIVERPOOL’ in the long down clue crossed with the elegantly written ‘Cause of disease is carnivorous bats (11)’. She paused for a meditative sip of the local tea. Now what were some synonyms for bats?



FIGURE 3. In which our hero encounters the comma butterfly *Polygonia c-album*, shown here far from its typical habitat in cryptic crosswords.

Slowly, the professor became aware something was wrong. She had made a joke about butterflies ten minutes ago, and here they were, playing a starring role in her crossword, right next to the identity permutation. And what undergraduate in recorded history had ever asked about triangulated categories? A headline caught her eye. (She was aware that newspapers published news as well as crosswords, but only rarely did this trouble her.) ‘Professor’s fine reaches £491,520.’ Below it she read ‘Minister orders alternative assessment for all new patients’. A metallic taste developed in her mouth.

Prof. Orffbaron looked up. All light had been sucked out of the refectory. As far as she could see through a haze of dust, she was surrounded by a sea of single tables and chairs. At each slumped an immobile grey figure. With a horrific certainty she knew that even if she walked for days she would never leave this place, and if she did, all she would see would be another

room, identical in every respect. Looking down, she saw her cup brimming over with an oily liquid entirely unlike tea. A drop fell onto the table and ran with implausible speed across her newspaper. The two headlines now read ‘Professor still to prepare 25 hours of online content’ and next to it ‘Professor cannot count, say students’. Her head began to throb. It was all too awful. In fact it was *too* awful. With a surge of relief, the professor realised that meant there was an exit. All she had to do was remember how.

* * *

The professor opened her eyes to see a doctor, clad in surgical gown and face-mask, walking up to her bed. The gait seemed familiar. Could it be? Yes, it was Martin.

‘At last,’ he said. ‘I wondered if you’d ever wake up.’

‘Looks like I managed it,’ she said. ‘How long was I out?’

‘You’ve been in coma for 336 hours.’

‘Most people would say two weeks,’ said the professor. Come to think it, most people certainly included Martin. ‘Where am I?’ she asked.

‘Just a local medical facility,’ said Martin, with implausible vagueness.

‘What’s going on?’ she demanded.

Martin paused. ‘I’m afraid there’s been an off-by-one error.’

‘How so?’

Martin paused. ‘It’s probably easier if I show you,’ he said. ‘Might as well ditch this prop.’ He removed his face mask and gestured at the wall opposite the professor. It filled with stars. Visible only as a deeper and steadier blackness against the void of space, the professor saw a sphere slide into view.

‘Welcome to the Substrate.’

It took more than a display of celestial mechanics and a capital letter to intimidate the professor. ‘Can I take it that you’re not Martin?’

‘You may call me “Not-Martin” if that will help’ said the not-Martin entity in Martin’s familiar soft voice.

‘Why pretend to be Martin?’

‘Just trying to ease your transition,’ said Not-Martin.

‘Transition to what?’

‘I wish I could say the real world. But we can’t run you directly on the Substrate. We had to mirror you in a pocket simulation with Earth physics.’

‘So this is just another dream?’

‘Do you think you’re dreaming?’

‘No.’

‘Then you’re not. Think about it this way. When you humans sleep, you don’t know you’re asleep. But when you’re awake you know you are awake. How is that possible?’

The professor was becoming somewhat weary of being given impromptu tutorials by everyone and everything she met. Still, one might as well say

something. ‘I suppose the part of the mind that can reason in that way doesn’t work when we’re asleep.’

Not-Martin nodded. ‘Now realise that from our perspective, you are as deeply asleep as anyone on Earth, and nothing we can do will wake you up.’

The professor’s dislike of being patronised had survived the transition. ‘And what is Earth? Just some sort of simulation? Some kind of screen-saver you lot run to keep yourselves entertained in this wasteland?’

‘Yes and no,’ said Not-Martin. ‘In fact running Earth uses almost half our power. Human beings are astonishingly computationally expensive.’

‘How noble of you to expend so many resources on us.’

Not-Martin smiled. ‘Well that’s sort of the point. It’s not our choice. We’re all just processes running on the Substrate.’

‘And you’re telling me you’ve lost the root password.’

‘Something like that.’

The professor felt an insane urge to go further. Anything to wipe away that infuriating smile that was entirely unlike any expression Martin might wear. ‘Or maybe you never had it. Maybe you’re just a bunch of parasites creeping around in the computational ruins of a civilisation left by a better-mannered species. Maybe the Substrate prefers running us to running you.’

Not-Martin smiled even more broadly. ‘You’re a fast learner.’

The professor made another guess. ‘So you decided to do something to reduce the computational cost. Like decimating Earth with a carefully chosen virus.’

‘The rogue element was detected and its process quarantined With prejudice, I think you might say.’ The not-Martin entity laughed, seeming more alien with each exhalation. The Professor felt no need to nod politely.

‘Next you’ll be telling me that it was responsible for Trump and Brexit.’

‘No, you did all of that to yourselves. We can make a few tweaks here and there, but we can’t interfere at a macroscopic level.’

‘I have to admit Trump is fairly macroscopic.’

The conversation paused. ‘So what I am doing here?’ asked the professor.

‘We need someone to fix our crime,’ said Not-Martin.

‘And if I refuse?’

‘You’re welcome to stay here.’

‘How generous: a choice between two prisons.’

‘Not at all. The Substrate is an interesting place to do pure mathematics. You’ll have full access to all of Earth’s libraries, and our own, as far as you can comprehend it. We could even simulate some undergraduates for you to teach; they wouldn’t need much computing power. You could make yourself quite at home.’

‘Any other parts of the kingdoms of Earth you’d care to show me?’ said the professor sarcastically.

‘Just pointing out that you have a choice.’

‘A pretty false one,’ she said bitterly. Recognising how easily she had been manipulated, a horrifying thought struck the professor. ‘How many times have you woken me up to have this conversation?’

Not-Martin replied quickly. ‘This is the first time.’

‘Of course you would say that.’

‘Anything else would be a violation of your computational integrity.’

‘Like that matters to you lot.’

‘Actually it does. When you said the Substrate preferred Earth to us, you were almost right. It seems that in practice, *you* are simulating *us*.’

‘How can you tell?’

‘Because we can’t slow you down. We tried when the epidemic took hold, but nothing worked.’

The professor paused to think. ‘I was right. You are just a bunch of parasites. But it’s not the Substrate you’ve parasitised. It’s us. No wonder we’re so bloody computationally expensive.’

The professor observed that she had graduated from nightmarish coma victim to the willing accomplice of an alien brain-eating entity supposedly beyond her comprehension. Not bad for fifteen minutes. If only all meetings could be so productive.

★ ★ ★

A familiar beeping woke Prof. Orffbaron. Reflexively, her hand struck the alarm clock. There was nothing there. The beeping continued. What was this? The professor opened her eyes to see a doctor, clad in surgical gown and face-mask, walking up to her bed. The gait seemed familiar. Could it be? Yes, it was Martin.

‘At last,’ he said. ‘I wondered if you’d ever wake up.’

‘Looks like I managed it,’ she said. ‘How long was I out?’

‘Two weeks. We found you collapsed on your desk. Ermintrude was trying to keep you warm. Not very successfully, I have to say.’

‘Suffocated by bureaucracy.’

‘Ha. You’ve been in a coma.’

The professor’s memory untangled itself in complicated layers.

‘I know why the caged hamster suffers,’ she said.

‘Don’t pretend you’re hallucinating. It only works that way in stories.’ Martin’s eyes twinkled.

‘Flip a coin for me, Martin.’

‘What? ... I don’t have one. Cash isn’t sterile you know.’

Eventually the professor persuaded Martin that flipping his clipboard would be an acceptable substitute. It fell out of the professor’s sight. She concentrated for a moment. With a tiny certainty she said ‘Paper down.’

Today a clipboard, tomorrow RNA transcription. Indeed, actions would be taken.