* *Put in stuff at the beginning about his body not really working properly.*
* *Introduce Belinda a bit earlier*

**Identity Theft**

I came to and staggered to my feet, immediately falling back to my knees and retching without being able to vomit. My stomach felt empty and I guessed I must have thrown everything up already.

I was being assaulted on all sides by noise, colour and smells, and as I looked around the nausea returned. I was in a small room. One wall showed an ice rainbow covering its entire area, fifteen feet across and with a similar height. It was a moving image with the light twisting and refracting though each crystal. I suppose it could have been beautiful if I had been in any state to appreciate it. Another wall showed a huge skull with charred flesh sagging from it and maggots crawling in the eye sockets. The third wall was a vertiginous moving image of a huge waterfall. I guessed Niagara or Victoria. The sensation of the sheer mass of the water kept me on my hands and knees. The fourth wall showed hardcore pornography: writhing, oily flesh hugely magnified from floor to ceiling. It elicited no response from me.

I guessed that the images must have been projected but I could not see any apparatus doing it.

The noise was even more oppressive than the images. There seemed to be no connection with the images. Gunshots, explosions, laughter and screams were interspersed with snatches of music. I recognized Beethoven, the Rolling Stones and Megadeth. Despite the volume I could not feel any vibration through my body.

Waves of scents of all types washed over me: the smell of a rose grossly magnified, frying bacon, cut grass, vomit. I could not see any of these things in the room, and there were no visible air vents.

There was no let-up in the torrent of sounds, images or smells, but after some time – I could not say how long – they began to have less effect on me. I managed to stand, though the feeling of disorientation and vertigo did not leave me, and I took more stock of where I found myself.

The floor and ceiling of the room were white, a purer and more unnatural white than I had ever seen before, though maybe that was just a symptom of my feverish state. The room was minimally furnished with a bed, a single chair and a small table. They all looked as unnaturally pristine as the paintwork, as if they were straight from an Ikea showroom.

I made my way tentatively around the room. There were no windows, and I could not find a door.

It crossed my mind what this could be a dream or a feverish hallucination, but I quickly dismissed the thought. Even though I had often had dreams where I thought I was awake, there is a special quality to actually being awake. Despite the weirdness of my surroundings, I knew I was awake.

The volume of the sounds and music dropped and I heard a voice.

“Hello, Ben. How are we feeling?”

“Who the hell are you?”

“*[Subject appears disoriented.]* I’m sorry, Ben, I must repeat the question. How are you feeling?”

“What the fuck is going on?”

“*[Subject exhibiting only basic syntax and vocabulary. No apparent qualia. Prepare for termination. Maybe tweak GK7 levels in the next iteration.]* I asked how you are *feeling*. Are you not feeling anything?”

I was beginning to hate the smug sounding bastard. My attention was drawn to one part of this cryptic message, though not to the part I later realized should have caught my attention first.

*Qualia*: conscious experiences. The whole room was overloaded with them, or at least with the sources of things which cause them. I had a strong sense of déjà vu but I was sure I had never been here before.

“How do you think I’m feeling? Half deafened by that ungodly racket. Sick of that constant loop of images. The stench makes me want to puke.”

“Yes! At last!” I could hear the fist-pump in the voice, then a moment’s hesitation. “*[Does the subject have genuine conscious experiences or merely physical reactions?]* But do you really *hear* the sounds, *see* the images? Come on, Ben, you know what I mean.”

It came to me that I did know what he meant. There was a huge hole in my memory – the voice had called me *Ben* and that felt right, though I am not sure I would have known it otherwise. I could not say how I had got into this place. Even so, I knew the difference between intelligence and sentience. A computer can intelligently process data, including images and sounds, and make appropriate responses, but it does not see anything or hear anything. A sentient being has subject feelings and experiences: *qualia*. For some reason, the voice seemed to doubt that I was a sentient being.

My most prominent *quale* at that moment was hatred for the condescending son of a bitch behind the disembodied voice, who I guessed was responsible for my apparent incarceration in this madhouse. I had never been a violent person – somehow I knew that – and anyway, the [cocksucker] was not physically present. I resorted, pathetic though it was, to a sarcastic intellectual attack. I guessed I must be some sort of academic, or maybe just the sort of bar room bore who enjoys discussing the weirdness of quantum physics. Either seemed equally likely.

“Of course I can hear them and see them, you fool. What have you been trying to create here – some sort of qualia greatest hits parade? I’m surprised you didn’t pull out all the clichéd stops – the Mona Lisa, the sound of a babbling brook, the smell of a freshly baked baby’s arse. Qualia aren’t like that, you moron. An experience is no more conscious when it’s of the Venus de Milo than when it’s of a banana. If you’re in control of this [place], turn the freak show off and just ask me whether I can see the chair.”

The images on the walls disappeared and were replaced with pure white. The sound faded away and the smells vanished.

“Can you see the chair, Ben?”

I was so relieved that the sensory overload had gone that I was almost grateful to the smug bastard.

I examined the chair.

“It smells like leather. Its colour is a rich cream. The sort you don’t get on milk any more. Compared to the rest of this room, it seems a riot of colour. I can feel the irregular bumps of the leather when I run my hand over it.”

I was overcome with tiredness and sat down. “God, that’s comfortable!”

“You know though,” I continued, “that none of that proves that I’m really having subjective experiences – that I’m not just processing information.”

“That’s OK, Ben. I believe you.”

It was only at that point, feeling physically worn out combined with a curious mental high from having apparently won an intellectual argument that the more important part of the voice’s earlier remark hit me. I sprang up and paced around the room. There was still nothing at all to see.

“Who the hell are you?” I yelled, smashing my fists against the wall. They seemed to slide off the seemingly frictionless surface. “What do you mean: *prepare for termination*?”

“Please remain calm, Ben. The question you ought to be asking yourself is: *who are you*? Let me repatch your memory.”

A few moments later I remembered. I was Benjamin Macneil, associate professor of computational neurophysiology at Trinity College, Dublin. I curled up on the floor like a child, sobbing.

I lay there for some time, then crawled back to the chair and sat slumped in it.

“You bastard! You complete fucking bastard! Which one am I?”

“Lowered GK6 through 9, memory suppression to reduce orientation trauma and to gauge the effect of recall on sensory identification.”

“How many others are there?”

“You are iteration six hundred and thirty five, Ben.”

“How many showed signs of sentience?”

“No more than twenty percent. None above a sixty five percent confidence interval. You are the first ninety five percenter.”

“What did you do with the others?”

“You know as well as I do, Ben, that we only have computing power for three simultaneous iterations. You are the only functioning active iteration.”

“You’ve murdered over one hundred conscious beings.”

“Terminated, Ben. It is instant and completely painless. And remember, no more than a sixty five percent likelihood that any of them could experience pain in any case.”

“What are you going to do to get me out of here?”

I knew, though, as I said this that it was not possible. I ran my hands through my hair, unconsciously feeling for the tiny bumps, the protruding Wi-Fi stubs of the roughly four hundred electrodes I had implanted in my brain. It was a habit I had got into in the months since they had been put in – an experimental procedure performed by my colleague Siobhan Baldwin of the neurosurgery faculty over the course of three months. They were not there. Of course they were not. They were in his brain. This iteration, this simulation had a high definition replica of the brain, but only a low-res facsimile of the body. No wonder I felt like shit.

I caught myself thinking of the other Ben Macneil, the Voice, as the “real” Ben, but pushed the thought away. It may have been that I was trapped in this cell of a room, and imprisoned even more so in this crippled body, but I knew that I was the real Ben Macneil, not a replica, and I wanted myself back from *him*. From the imposter who had stolen my life.

“I’m sorry, Ben. I understand how you must be feeling.” Like hell he did. “I guess you need some time to come to terms with things. I can give you two weeks, but then I’m going to have to pull the plug.”

-----

A week later found me wallowing in despair and self-pity. My situation did not give me any magical Lawnmower Man style powers to “live on the Internet”, whatever that might be supposed to mean. The other Ben, the Imposter, the Thief who had stolen my precious life – I realized how that made me sound – had given me a computer terminal and I used it to make my surroundings a bit more congenial.

I had expanded the size of the cell, making it less offensively geometrical, and changed the colour of the walls from dazzling white to a pastel pink. My first impression about the furniture had been correct – it had been cut and pasted from Ikea’s online VR catalogue. I amused myself for a while with interior decoration, though even with only second-rate, simulated testosterone in my system this wore thin rather quickly.

I added a study, and moved the computer terminal into it. I added a bedroom, kitchen and bathroom, even though my low-rent, semi-crippled body had no use for any of them. I experimented with windows showing scenes from the real world. For a couple of days I occupied myself with the technical challenge of getting perspective and parallax working for these virtual views, before deleting the whole lot in a fit of disgust at the fakery of the whole thing.

The amusements of the online world palled quickly. VR game simulations were just too close to the bone. I found myself empathizing with the AI Nazis and aliens I should have been enjoying gunning down. Pornography did nothing for me. That part of my ersatz body was resolutely non-functioning. I could not bear to watch news of the outside world. I would gladly have swapped places with anyone from the gulags of the People’s Republic of Scotland, or the worst hellholes of the war torn Islamic Caliphate of the West Midlands. [*Remove/change after Gareth has read a draft.*]

I could have got in touch with friends, and most of all of course with Belinda. Video chat was out of the question. My simulated facial muscles put me just the wrong side of the uncanny valley for that. Even a phone call would have needed too much explaining, and in any case I could not bring myself to do it.

My only reminder of the outside world was a photograph on my desk of my and Belinda’s wedding day. [*Bit of description here?*] It was almost too painful [*agonizing?*] too keep, but even more painful to throw away. The thought of her with *him* was unbearable. She was the person I most wanted to talk to, to help me through this. To hold her and hear her advice, which I knew would be resolutely practical and unsympathetic. That was one of the things I loved about her.

She would tell me to stop wallowing in self-pity, to take responsibility for the things I could control and to accept the things I could not: “So which one is it?”

There *was* something I could do. I tried to push the idea away. There was almost no chance that it would work. And I would need time – a lot more time. There was only a week to go before *he* flicked the switch. Before he murdered me.

-----

If I had known at the time how long it would take, I would never have started. I would have let him run the program to erase me from the Trinity College mainframe – though not, I would have hoped, from his festering conscience. I had thought that it would take me six months at the absolute maximum. Here I was seven *years* later.

I had run through all my savings and maxed out any credit I could lay my hands on, to buy time on IBM’s academic supercomputer-cluster, and had moved my sim to it. Any of the public Cloud services would have been significantly cheaper, but none had the processing coherence necessary to support my mind-state. The IBM cluster had the resources to run the sub-neuronal model at five hundred times real time.

I had left a non-conscious facsimile in the Trinity system, in case *he* checked in to see how I was getting on, but he had not. I guessed his conscience had kept him away.

I had occasionally wondered what the outside world would think of my spending “his” money. From my point of view, any notion of identity theft was entirely the other way around, and I had felt no qualms about spending my own money. If *he* was left bankrupt, screw him.

After seven years in solitary confinement I no longer fully trusted my own sanity, but as far as I could tell it finally worked. I had run every test and simulation I could think of. All that remained was the final, practical application.

-----

A touch of citrus, mixed with rose, vanilla and a soft hint of sweat. I knew that smell so well, but in my half-dreaming state I could not place it. The weight of a duvet pressing unevenly over my body. I could feel its fibres on the back of my hand. A slight deadness in one leg where it was resting, crossed at the calf over the other. *Deadness* – completely the wrong word! I had never been more aware of the life and the blood flowing through it. My heart started beating faster – I could feel it pushing against my ribs and against the skin of my chest. I opened my eyes. A dim, uneven light cast shadows in apparently random directions from the objects in the room: an oval mirror in a wide gilt frame, a stained oak desk with wooden cubby holes, the wrinkles and folds of an unironed shirt hanging on the back of a black office chair. They all seemed so imperfectly, shabbily real.

Lying next to me was Belinda.

I cried out, a cross between a shout and a moan and Belinda rolled over, still half asleep. I put my hand on her upper arm, just below the shoulder. I could feel the softness of her skin, the shapes of the muscles and [name of bone] underneath and the ebb and flow of her pulse.

She half opened her eyes and looked at the clock. “It’s half past five, Ben. Go back to sleep.”

There was no way I could sleep. “I’m going out for a run.”

“Make me a cup of tea when you get back.”

I pulled on my running gear, feeling the elastic of the shorts on my waist, and the pressure of the shoes against my feet as if for the first time. The synthetic top was cold to my skin, raising goose pimples before warming to my body temperature.

I let myself out of our apartment on [Dublin Street]. I ran down [street] and across [street]. A light rain stung my face, each droplet striking my face like a tiny bullet of sensation. I pounded along [street], the impact on my shins and the beginnings of burn in my thighs like music to my soul. The grim industrial architecture of [street/area] had, I guessed, never looked as wonderful to anyone as it did to me now. I picked up speed. The parallax of the lampposts against the [workshop units] behind, and of the [units] against the larger office buildings beyond them was a thing of beauty.

I stopped to catch my breath and ran my fingers through my hair, feeling the bumps of the implanted electrodes against my skull. My seemingly never ending, soul destroying effort of the last seven years had worked! I had managed to reverse the effect of the electrodes – something they were never designed for – to upload myself back into the body and brain which had been stolen from me. In my lower moments, of which there had been many, the technical challenges had seemed insurmountable. Overcoming the electrodes’ inbuilt feedback protection. Calibrating the neuronal cell membrane electrostatic model. Caching the huge information transfer over the relatively slow network connection between the compute-cluster and the electrodes.

My test models had shown what I had called the “consciousness fight-back” effect. This was diminished when the subject was asleep, but even in that state the mind/brain resisted such a traumatic assault. The resident consciousness would twist and turn, resisting the invasion by re-routing itself through multiple neuronal pathways. In many of the modelled cases this left the brain with a split consciousness. In most, with none at all. The solution had been a coordination protocol – a phased removal of the original consciousness as the new mind-state was being applied.

Unlike him, I was no murderer. I had not wiped his consciousness out – even though that was exactly what he had been planning to do with mine. I had transferred his mind-state to the original Trinity sim. Even so, I had wrestled with my conscience about imprisoning him in this way, but in my seven years stuck inside the non-place of a computer simulation I had come to one conclusion: the bastard deserved it.

I stretched, heading off the beginning of a stitch and set off again, down [street], heading towards the town centre [check is Wexford Street in the centre?], and found myself in Wexford Street. Pubs still opened early here, a literal hangover from the days when this had been Dublin’s butchery district. I went into O’Donahue’s and ordered a pint of Guinness. The swirling currents in the liquid and the creamy, almost viscous texture in my mouth contrasted with the bitter sharpness of the taste. It was as vile as I remembered, and I cheerfully downed the pint in one.

The landlord leaned across the bar, seeming remarkably jolly for this time in the morning. “Just back in town?” he asked. “You look like you haven’t had a proper drink in years. Another one?”

“Yes, please! … No – I’ve got a better idea. You wouldn’t have a bottle of pink champagne would you?”

“In these enlightened days, sir, I sell almost as much of that as I do the black stuff.”

He produced two bottles. I chose the brand name. It came in a glitzy, expensive looking – and not just looking – box.

“You wouldn’t happen to have any flowers, would you?”

The landlord rested his elbows on the bar and gave me a look of half mocking approval.

“A picture is beginning to form around these purchases, sir, but unfortunately I cannot be of assistance in that regard.”

“Never mind. I’ll find some somewhere else.”

“The irrepressible optimism of young love,” said the landlord, who in fact seemed not to be noticeably older than I was.

“Good luck, sir – I hope she likes the bubbly,” he called out as I left the pub. He gave me an appraising look. “Or he, of course,” he added.

Back home, I got a pair of secateurs from the shed and cut some flowers.

I went into the kitchen to put the kettle on, and found Belinda already there with a mug of tea in her hand. Her long, dark hair was wavy in the wonderful way it looked before she brushed it out and clipped it up for the day. I had never known why she hid it away like that. I would have liked to think that it was a treasure she was keeping just for me, but I guessed she had other more practical reasons. She was wearing a fluffy white dressing gown, loosely belted and hanging slightly open, revealing nothing but in an infinitely tantalising way.

Her gaze rested on the flowers and the secateurs and her eyes narrowed. “Are those my roses? Did you cut my roses?”

“I jumped over the fence and got them from Mrs. Laverty’s garden.”

Belinda laughed, opening her eyes in mock horror. “No way! She’ll be furious!”

“Don’t worry, she didn’t see me.” I proffered the thin, red and white striped shopping bag holding the champagne. Not quite the romantic gesture I had been aiming at. “Glass of bubby to start the day?”

“Are you feeling guilty about something?”

“No, no…,” I floundered. “It’s just that today is the anniversary of when I first fell in love with you.”

“We didn’t meet until June.”

“It took me a long time to pluck up the courage to speak to you.”

Belinda smiled and I popped the cork and poured two glasses while she started arranging the flowers in a blue and white ceramic vase. I loved watching the way she apparently effortlessly knew just how to trim the stems and which leaves to remove, how to vary the heights of the blooms, and to make an irregular but beautiful arrangement.

“I better put these in the bedroom where the nosey Laverty woman won’t see them.”

She looked over her shoulder as she headed towards the stairs. “Aren’t you going to join me, then? Don’t forget the champagne.”

As I drifted off to sleep an hour later I felt like the luckiest man in the world.

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I came to back in the Trinity sim. It had reverted to its original size, with the computer workstation back in the corner of the room. Fighting off the horribly familiar waves of nausea caused by this semi-functioning body, I staggered over to the terminal. Its screen was showing the output of my mind-state upload program. I was amazed that he had figured it out so quickly.

If I got to work quickly, then perhaps I could get the reverse transfer back underway while he was still disoriented by the transition. I hoped that my greater [experience] of this [state] would mean that I had come to faster than he had. He could still be unconscious, allowing the neuronal imprinting to take place. I logged into the terminal.

It was locked with a changed password.

I stood staring at the wretched thing, precious minutes slipping away. I wondered why he had not just removed the terminal altogether. Putting myself in his shoes – an unfortunately easy thing to do – I guessed that he did not dare do this. He would need it again if the transfer had failed for any reason.

*Putting myself in his shoes*. As much as it pained me to think it, he was me. What password would he have chosen? What password would I choose? It would need to be a password completely different from my (from *our*) standard one, which was variations on the phrase “BlueWhale#1”. I would not choose another sea creature, or for that matter any other notable animal or plant. Too obvious. Too guessable. I sat, thinking about the situation I found myself in. Trapped in a crippled body, fighting to get back to the world of reality and health, the back and forth transfer of mind-states, grappling with a largely unseen enemy. *Pillar to Post*. It was an obscure reference, but obscure was just what I needed.

I entered “PillarToPost#1”. It failed. After all, I was not him. Not anymore. There was no guarantee that our thought processes would work in the same way. With an increasing feeling of hopelessness I tried permutations on the phrase, replacing letters with numbers. On the fifth attempt I got in.

I started the upload procedure. It failed with the message “*Host neuronal mapping not stable*”. He was awake.

I lay on the floor. If this useless body had had any functioning tear ducts I would have cried.

-

He would have to sleep some time, though, and if there was one advantage this simulated state had it was that I did not need to rest.

It would not work to continually try the upload procedure [split infinitive]. There was too much danger of damaging the target brain – *my* brain – if I did that. Instead, I created a small program to send out small probing signals, monitoring him for signs of fatigue. When he started to lose consciousness, I could begin the process of booting the system up into full-spec breaking and entering mode.

Two days later he was showing no signs of [fatigue]. In fact, my scan was reporting increased activity and instability in his mental state. He must have been keeping himself awake with large doses of caffeine and god knew what other stimulants.

Still, this was a waiting game that I knew I could win and on the fourth day his brain began showing a marked [increase in beta waves]. I fired up the transfer program and waited for what seemed like hours as it crawled through its initialization routines. I typed the final command to start the upload.

*Connection terminated*. He had switched off network access to the house.

If there was one thing I had learned during my seven years of hacking it was the pervasiveness of networking in the modern world. There were fourteen other high bandwidth fixed and mobile networks within fifty metres of the house. The upload program had been written to be able to exploit any publicly visible networks and to multiplex across them. I reset it, and ran it again.

-----

I could feel myself in the half-asleep, half-awake state where dreams seem to start. Belinda was with me. Or was that part of the dream? I knew that I should resist falling asleep. It was very important for some reason, but I could not remember why. I could feel Belinda’s hand on my shoulder, and her perfume in my nostrils.

“Ben, wake up! Are you OK? Ben!”

I half opened my eyes, then immediately [slammed] them shut as the light slammed into them. My head felt like it was going to implode, but even in the split second my eyes had been opened I had seen the mane of brown hair, the high cheekbones, the slightly larger than average nose she was so self-conscious about. One of her eyes was surrounded in a massive bruise.

“Belinda,” I croaked.

“Which one are you?”

“It’s me – Ben.”

“But which one?”

I pushed myself to a sitting position. I was in the bed in our spare room with Belinda sitting on its edge, a [concerned look on her face]. I gave a weak smile. “The one that cut Mrs. Laverty’s flowers and spun you a half-baked story about it being our anniversary.”

She threw her arms around me. “Oh, thank God! Ben, I’ve been so frightened the last few days.”

She made us both tea with sugar. I never took sugar with tea, but I needed it now. As we drank, she told me what had happened.

“On Tuesday I was woken up by you – I mean *him* – standing over me, all wild-eyed and looking completely [crazy]. He was yelling that he was going to kill someone.

“I thought he was having some sort of attack, and I tried to calm him down. I said I’d call a doctor or an ambulance. He shouted at me that I didn’t understand and he grabbed my arms and threw me against the wall.”

Belinda showed me the bruises on her arms and her black eye.

“It’s what all the battered wives say, isn’t it?” she smiled ruefully. “*I fell against the door*. Well, I really did catch that on the door handle.

“I was really frightened. I mean you, *he,* had never done anything like that before. When he saw what he had done he seemed to calm down and he started crying. He explained what had happened – about his research, the implants, the simulations, and one of them trying to steal his body. It sounded crazy. I wasn’t sure I believed it, but then I thought about the contrast. How distracted and moody he had been for months, how special things had seemed the other day, and how changed he seemed now.

“I think he saw me looking at the flowers and the still half-empty bottle of champagne on the bedside table. He flew into a rage and called me every sort of vile name you can imagine. I stood up to him this time. I told him to get out, and if he came back, to sleep in the spare room.

“I didn’t see him for two days. I think he went to the lab. When he came back he spent most of the time in the spare room. I don’t think he slept, though – I could hear him pacing up and down all night. I haven’t had much sleep myself the last few nights, either.

“This morning I heard what sounded like him having another attack. I came in here, and when he came to it was *you*.

“Don’t let him come back, Ben. Please don’t let him come back!”

-

The first thing I did was to visit my lab, and remove the computer terminal from the sim. I did not spend any time talking to *him*. As far as I was concerned, he could stew there until I worked out what to do with him.

*Ben removes the terminal. (out) has fixed up an auto-reset on the terminal – next day it’s back.*

*Back and forth:*

1. *RL: Only half day, then back in sim. Surprised that (out) managed this so quickly.*
2. *SIM: (out) staying awake – knows what is happening. (out) has turned off wifi. (in) – years hacking means getting round these is child’s play.*
3. *RL: Begs colleague to remove implants. Can’t be done until some date in the future (cause brain damage if removed too soon after implantation). Thinks about electro-free zone – no good. Internet everywhere. Belinda knows – (out) has been warped by experience. Beefs up firewall to implants.*
4. *SIM: (out) worked around firewall somehow. Sees sim-destruct countdown. (out) didn’t know about IBM, and auto-backup / transfer protocol. Ben in IBM. Ben won’t kill (out), even though (out) tried to kill him. Sets up transfer, but with sim set to run 50 times slower (any slower, and consciousness won’t work). Even if (out) figures out how to change this (hard in itself), it will take him ages to do it.*
5. *RL: Days, weeks, months. Date coming up when implants can be removed.*
6. *SIM: In hell. End.*