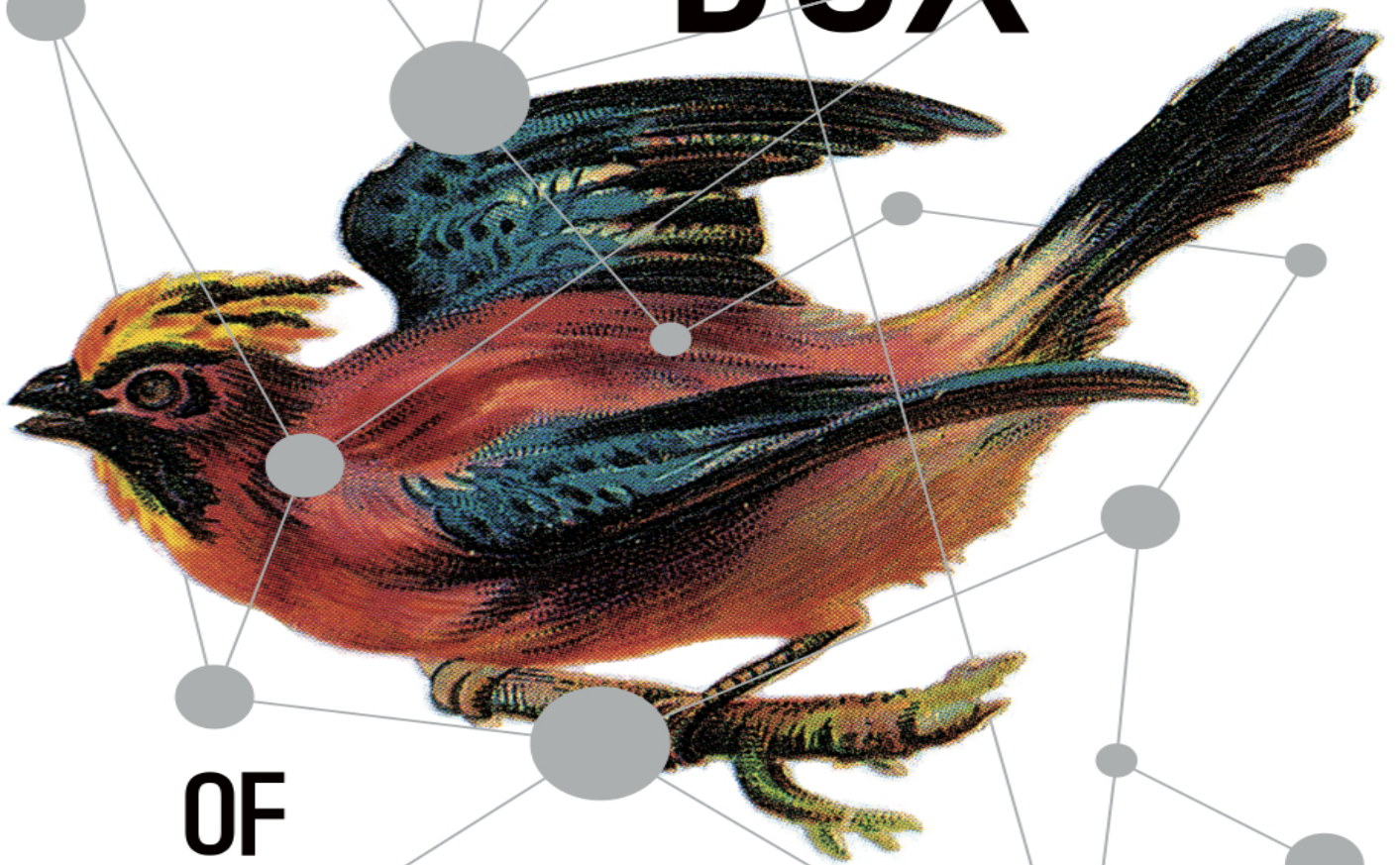


CHARLES FERNYHOUGH

A

BOX



OF

BIRDS

# **A Box Of Birds**

**Charles Fernyhough**

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Three handwritten signatures in black ink, arranged horizontally. The first signature is 'Dan', the second is 'Justin', and the third is 'John'.

Dan, Justin and John  
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## ABOUT THE AUTHOR



Charles Fernyhough is a writer and psychologist. His first novel, *The Auctioneer*, was widely praised. *The Baby in the Mirror*, his book about the first three years of his daughter's psychological development, was translated into seven languages. His most recent non-fiction book, *Pieces of Light*, is about the science and stories of autobiographical memory. He divides his time between London and County Durham.

## BY THE SAME AUTHOR

### FICTION

The Auctioneer

### NON-FICTION

The Baby in the Mirror

Pieces of Light

For Valerie and her grandchildren

When you begin to study the warblers you will probably conclude that you know nothing about birds, and can never learn. But if you begin by recognizing their common traits, and then study a few of the easiest, and those that nest in your locality, you will be less discouraged; and when flocks come back at the next migration you will be able to master the oddities of a larger number.

- Florence Merriam,  
*Birds Through an Opera Glass, 1889*

Tit lark —  
I dont know it  
Red Lark —  
never seen it  
Great Lark —  
dont know it

- John Clare,  
*Bird List of 1825-26*

## **PART ONE**



**Gareth**

## **CHAPTER ONE**

### **The Thought Show**



They turn up in fancy dress, expecting a party. They can arrive at my lab done up like naughty French maids, jolly pirates still drunk from the sea, or maybe a pair of gorillas with realistic flaring nostrils. Once, they broke into someone's amateur dramatics costume cupboard and came straight here with the spoils, and I spent an hour teaching the essentials of synaptic signalling to both ends of a moth-eaten pantomime horse. I tell them that neuroscience is a serious business, but it's hard to be serious about anything when you've chosen your third-year options and there's no coursework due this side of Easter. Gareth shows up first, glancing around at the framed photographs of professors on the corridor walls, wondering which door is my lab and what he would have to do to get in there. James swaggers on behind, carrying his public-school confidence like a bulky parcel on a busy street, expecting people to get out of his way. They're not meant to be up here on the research floors at all, given the security situation, but this is the only part of the Institute where I can hide their threadbare costume dramas from fellow scientists' eyes. Besides, I have to get some facts down them if they're going to have a chance of passing anything this year. At least if they come up here to my office, they can't attract any attention. Persuade them to keep the noise down, and no one will have to know they're here.

‘I’m going to need a volunteer,’ I tell them.

Gareth dumps his file onto one of the comfy chairs and offers himself uncertainly. Today he’s turned up as a Franciscan nun, complete with black veil, polyester tunic and clunky plastic neck-cross. His eyes are anxious and shadowy, and can’t stand anything for long. He gives the constant impression that someone is shooting at him.

‘I’m going to need you to sign a consent form. What we’re doing involves pretty harmless magnetic fields, but we need to get the paperwork right.’

James finally gives up on trying to read the secrets of my desktop and settles down in the other chair. ‘She’s going to experiment on your brain, Gaz. She’s going to wire you up to her machines and find out what makes you tick.’

‘Am I wearing that?’ Gareth says.

I grapple with the box. I come up holding an aluminium-cased helmet padded thickly with foam. A spacesuit visor slots over integrated goggles. A spinal column of processors and cables hangs down from the back.

‘For a little while,’ I say. ‘Just long enough for us to find out what you’re thinking.’

‘Better take your wimple off, Sister,’ James says.

I’ve pulled the blinds down in the office. The one-way glass of the observation window looks out onto the black emptiness of the lab. Outside it’s daylight, a bright March afternoon in the heart of the Forest Campus. James and I are perched on the workbench by the door, separated by a pile of research papers. Gareth is sitting in the comfy chair with his head inside the helmet, which is feeding real-time outputs to a desktop machine linked to a distant mainframe. The output of the software is going to a series of floor-mounted projectors planted in a fairy ring on the carpet. The

space between us is filled with a huge 3-D hologram of Gareth's brain.

'What does it look like?' Gareth says.

'Colourful,' James replies. 'I'd say the rude thoughts are the pink ones.'

Gareth makes a snorting sound behind the visor, and a blob of brilliant yellow shoots out from the centre of the light-show and dissolves into the rose-threaded haze of his frontal lobe.

'Can you actually tell what I'm thinking?'

I laugh, and realise I shouldn't. 'This isn't the movies, Gareth. You can't read someone's thoughts like you read a computer file. You can see which brain areas are active, but that's pretty much all. It's a toy, really. Something to keep my brightest students interested.'

'Think of something pleasant, Gaz,' James says.

His friend's lips move behind the visor. Blue streaks of neural activity loop from front to back of the brilliant ghost-brain, and a warm red glow swells in his limbic system, that blurred loop of nuclei lodged between the two hemispheres.

'Not that pleasant, perv-features ...'

I'm wondering how far back this friendship goes. The fancy-dress thing, the nerdy jargon, this shared certainty about what's funny and not funny. It suggests a schoolboy closeness. A history.

'Have a look,' I say.

Gareth lifts the visor. As soon as the light sparks on his retinas you can see a smudge of activity way over in his visual cortex, on the far right from where we're looking.

'That's you seeing. The bit at the back is where you process visual information.'

'So you could download this stuff...you could put all my thoughts and memories onto some massive hard drive and have a virtual Gareth Buckle sitting there on your computer?'

‘Like I say, this isn’t Hollywood.’ I click on the remote and zoom in on an amethyst flashpoint in his frontal lobe. ‘Even if you had the best resolution in the world, you would only be able to see which neurones were working. You wouldn’t be able to see inside that neural activity— what it means to the person who’s having it.’

In the gloom next to me, James sounds unimpressed. ‘It’s not him, though, is it? It’s just biological jazz. Stuff going on in his brain.’

‘It’s all him, and none of it is him. What’s him is the way all the different bits work together. Consciousness is probably just a lucky byproduct of the brain’s enormous complexity.’

‘You don’t get out much, do you, Miss?’

I pretend not to hear.

‘OK, so can it work the other way round?’ Gareth flips the visor shut and disappears into the helmet again. ‘Can you give a person thoughts and memories they didn’t have before? I saw this film with Arnie Schwarzenegger...’

‘You’ve never watched a film that didn’t star Arnie Schwarzenegger.’

‘Sorry,’ I breeze, ‘but it doesn’t work that way. A memory isn’t a chunk of data you can just plug in like a game cartridge. That makes for great TV, but it has nothing to do with real science. You want me to point to what makes Gareth the person he is. I can’t do it. You — that consciousness, that self, that body of memories — is only possible because of lots of different parts of the brain working together. Memory implants are another one of your science fiction myths, I’m afraid.’

The nun in the helmet makes a disappointed groan.

‘Anyway,’ I say, thumbing the remote and quitting the software. ‘We’re only allowed to zap you for a couple of minutes at a time. Sorry.’

I reach behind me and undim the lights.

‘So this is what you do in your top-secret research centre? You experiment on people’s brains?’

Gareth is keeping the helmet on, like a kid who won’t get out of a fairground ride, thinking he’ll spot the silent secret of its magic.

‘Not people,’ James says. ‘Animals. The kind of considerate volunteers who keep their outrage to themselves.’

‘No wonder they’ve been round here breaking your windows.’

I think of the circular email that went round after the latest attacks on the East Wing. Professor Gillian Sleet, the lithe and permatanned Director of the Institute, reminding us of the need to maintain vigilance in light of the new security situation. No one knows if those Conscience activists were students or not. The trouble is, we don’t know who’s a danger and who isn’t. Just be careful, they tell us, and trust nobody. Which is precisely why these two are not supposed to be here.

‘Look at this scan.’ I dim the lights again. ‘This isn’t you, Gareth; this is a composite made up of images from hundreds of different volunteers. Same technology, just a much more powerful system.’

I touch the remote. Another holographic brain ghosts up in front of our eyes, its shapes made perfect by countless superimposed iterations. Running through it, like the root system of some supernatural orchid, is the vermilion net of the Lorenzo Circuit. I’m always stunned by it, humbled and threatened by its beauty, by the ambition of the thing as much as anything. It leaves nothing out: the control systems of the frontal lobe, the emotion circuits of the limbic system, all the linked factories of meaning that patch the human cortex. That swirl of self shows me a dream of connectedness, challenges me to be more whole than I am.

‘Hey,’ James says. ‘Who’s good-looking?’

‘As I say, this isn’t any one person’s brain. It’s too perfect. It’s been morphed together from lots of different scans, and a fair bit of artistic impression. But it shows the circuit we’re interested in.’

Gareth tips up the visor to look.

‘You can see how it runs through just about every major brain area: the prefrontal cortex, the limbic system, the memory circuits of the temporal lobe, the visual and auditory areas. We understood what these different parts do, but we didn’t understand how they all fit together. This is the Lorenzo Circuit: the connections that make us what we are. The deep root-system of the self. The basis of memory, emotion and consciousness in the human brain. And we’re trying to map it.’

Gareth is distracted by the activity on my terminal. The scan is drawing data from my own hard disc, which has blown the screensaver and revealed my desktop. A lilac banner stares back at us, displaying another paragon of connectedness, the virtual universe of the networking game we call Des\*re. I feel dangerously exposed, witnessing this public demonstration of my obsession.

‘Cool,’ he says, his eyes still gravitating to my screen.

I wish I’d had the sense to log off before they arrived. A few minutes rooting around on there and he would think he knew me inside out. With a twitch of panic, I wonder whether anything new has come through for me.

‘Why would you want to do that?’ James is saying. ‘Map it or whatever?’

‘Because this circuit is the answer to your question. It’s what makes you you. The work we’re doing here is going to tell us how a brain comes to have a sense of itself, how it gets a view of its own past and future, how it situates itself in the present. Some people doubt whether this circuit even exists. They say you’ll never be able to trace human consciousness back to any single immensely complex system. But we don’t doubt it. This whole Institute, all these

different research teams, are dedicated to it. We've got the world experts on these techniques, supported by very substantial international funding. We're trying to map the Lorenzo Circuit in more detail than has ever been done before.'

I hear the sound of my own enthusiasm, and respond with a little internal shiver. It's probably dangerous to care too much about this stuff, at least while people are watching.

'But why are you using animals? Why don't you just zap a load of humans?'

I sigh, recognising the complaint from a hundred tutorials before this one. 'Some of these processes are very basic. They work pretty much the same way in mice as they do in people. The human brain has vastly more complexity, but we can't do the experiments we would like to do with people. It's like trying to map a city. Brain scanning gives you a rough street atlas, but we need to understand these pathways brick by brick, stone by stone.'

'Neurone by neurone,' Gareth muses.

'So to do that you've got to chop up a load of monkeys?'

'Not monkeys,' Gareth says. 'You'd never get permission for that.'

He shoots a glance at his partner, which is returned with a look of mock surprise. There's a joke here, something they're not sharing with me.

'OK, so you torture a few rats. What does that tell you?'

I hesitate, wondering how much to tell them. All the answers are there in the holding-room across the corridor, locked away in the terabytes of data that are my experiment on amyloid plaque formation. I feel a sudden pang for my ninety-nine mice, born by mail-order, raised under artificial light, just so I can find out whether an overdose of protein in their brains sends them drooling into dementia. It's the same guilty dread I feel at the thought that it might not work, that they will have lived and run their mazes and died for nothing. But you don't let yourself have

that thought. Wherever you go, as a scientist, you don't go there.

'The research we're doing here is part of this bigger project. Up here on the fourth floor we're using animal models to work out why certain bits of the Lorenzo Circuit start malfunctioning. My particular interest is in dementia. Profound, pathological forgetfulness. We manipulate the gene which controls the formation of a certain protein. We think it's the build-up of this protein, in certain key regions along the course of the Circuit, that causes dementia.'

My screensaver blooms, saving my secrets from Gareth's stare. If I've had another gift from my mystery trader, somewhere far away in cyberspace, it will have to wait until these two have gone.

'So that's why memories can't be implanted? Because it's this massively complex circuit, passing through all these different brain areas? You can't just implant a memory; you'd effectively have to implant a whole new brain?'

'Exactly.'

Gareth finally extracts himself from the helmet and holds it out to me.

'You put it on, Miss. We want to see what makes you tick.'

My skin prickles. I light up with a blush. All my life I've been dodging this, hiding my doubt behind determined smiles, hoping the question would never come. But then something happens that throws you wide open, and you sense people looking in on the shattered illusion of you, marvelling at the workings. I tell myself it's just the hangover of another late night at the computer, silently communicating with people who are as lost to themselves as I am. But it's more than that. It's the woozy, broken-up feeling of being in a million places at once, watching that mysterious circuit trying to pull it all together, and yet somehow failing to feel it. They're looking at me, interested. I made out that I didn't question it, didn't doubt that that

swirl of connectivity on the screen actually added up to a person. But maybe I do.

‘Nothing ticking,’ I tell them, as casually as I can. ‘There’s nothing ticking in here.’

James gets up from the bench and goes over to the one-way mirror. I follow him and reach over my desk to release the blinds. It’s still light outside, and the room takes shape with startling clarity, exposing me with a sharpness that feels like guilt. James stands there looking into the blackness of my closed-down lab, one hand shading his eyes.

‘So what exactly do your demented mice do in there? What’s the big paddling-pool thing?’

‘Flotation tank,’ Gareth quips. ‘It’s very stressful being a scientist.’

‘Water maze,’ I say, calmly searching my desk for their essays. ‘The big paddling-pool thing is basically a big paddling-pool. You add some milky stuff to the water so that it becomes opaque. You put a mouse in somewhere around the edge and see if it can find its way to a submerged platform. That way you can test the animal’s spatial memory.’

James is looking at the paddling-pool, trying to decide if it’s cruel to make a humanely-reared mouse swim through milky water. He takes his essay without even glancing at the mark. Gareth is trying to disturb my desktop again, to see what lies behind the branching-neurone screensaver. My late night comes back to me in yawning colour. The human clutter of the gaming rooms, the movie clips gifted from faraway traders, the network of linked webcams that creates the virtual universe of Des\*re. Hours of poring over that brilliant ribbon of streaming video, probing its anonymity settings, trying to decode the when and the where of it. And, through it all, this nagging certainty that I’ve found him, or that he’s found me.

'Do you get out into the forest much, Miss?' Gareth is saying.

He's standing at the window, looking down at the burn that flows round the back of the Institute.

'Of course she does,' James says. 'She works here.'

'Have you ever seen McQueen out there? You know, when you're walking to work and stuff?'

'I don't know. What does he look like?'

Gareth makes a simian chatter and chucks at his armpits.

'Sort of chimpanzee-ish.'

I shake my head wearily. 'There can't be a chimp living wild in Wenderley Forest, James. It's not possible.'

Both seem convinced. 'It belongs to that biotech company, Sansom. Your rivals. We reckon it escaped from their lab and it's now roaming free with the squirrels. The word is that it's surviving on scraps from the kitchens. Sansom are getting in a real state about it. They're trying to find it and shoot it before anyone finds out the truth about their research.'

'I've heard rumours like that before. It will have been some bored student, dressed up for a prank.'

'No, Miss. It's a real chimp. One of our mates has seen it.'

'Chimps are practically human, Gareth. You'd never get ethical approval to work with them.'

'Sansom don't worry about ethical approval,' James says. 'They're the third biggest biotech on the planet. They do what they want. Anyway, I assumed you'd know about McQueen. I thought all you vivisectionists stuck together.'

The label stings. I'm too aware of how it sounds, to people who don't actually understand what this work involves.

'Don't worry about him, Miss,' Gareth says. 'His lot say all of it is wrong. Ethical approval or not. Experimenting on animals can have no justification, whatever the potential benefits to the experimenters.'

'Who are "his lot"?' I ask, with a feeling that I'm breaking in halfway through an argument.

‘Conscience. The radical animal rights group.’

Gareth looks at me, enjoying my unease. James’ eyes are turned down, gazing past a smile. He’s shaking his head gently. My heart goes flat and stiff in my chest. The last thing I need is a Conscience activist in my tutorial group.

‘I’m not with Conscience,’ he says. ‘I’m nothing. I’m not anything.’

‘You were on that demo! At Sansom. You’re there every week. It’s either you or it’s your twin brother. You made the local news, humanoid.’

James yawns extravagantly, dismissing the argument as easily as he started it. He doesn’t really care what happens in that lab next door. He just wants to win something, some game of his own making, beat someone, it doesn’t matter who.

‘Well, save it for the debate,’ Gareth says. ‘I might let James ask a question if he’s lucky. Are you coming, Miss? Tonight, at the Priors’ Hall.’

I glance at the invitation card pinned to my corkboard. Gareth has invited me to something, a college debate on issues arising from the East Wing attacks. Motion: a species that wants cures for its own diseases should not test them out on its inferior cousins. Just what you need, when thousands of dollars’ worth of damage has been done to your world-class research centre: a bunch of students talking about it. But Gareth is scheduled to be speaking. I’m his tutor; I’m supposed to be supportive about this kind of thing.

‘I don’t know. Won’t I be at home marking your essay?’

He lifts his file onto his lap and starts scribbling in it. The label says GAZ’S RANDOM NOTES ON NEUROSCIENCE.

‘Just applying the finishing touches, Miss.’

‘You’ll have to read it really carefully,’ James says. ‘He’s not letting anyone else see it.’

‘What’s the big secret?’

'It'll all be in the essay.' James taps his nose confidentially. 'He won't tell anyone until he's absolutely ready to go public. He'll get in trouble again.'

'I didn't get in trouble because of my foolproof scheme for getting rich. I got in trouble because I hadn't satisfied my slave-masters.'

'You mean, you hadn't handed in any work?'

Gareth looks up at my computer, seized by an idea.

'Can you access my college record on that thing?'

'That's for me to know.'

'I'll have to hack into your account, then.'

'You could try. After recent events, they've gone a bit tight on security.'

'He can handle security,' James says, with a sly wink at me. 'You know he hacked into the Pentagon? He was, like, twelve.'

I think of the new bank of firewalls they put in after the latest attacks on the East Wing. You now have to enter a daily-changing security code just to get on to the networked computers. I remember the Executive's hurried press release in the hours after the last attack, about the importance of scientific work being allowed to continue while we strive to find alternatives to experimental research with animals. That doesn't help this feeling of dread. They look harmless enough, with their big smiles and prankish undergraduate humour, but I'm still going to find myself in desperate amounts of trouble if anyone catches them up here. I want them out of here, I want my house in the trees, a large Jack Daniels and my own company until bedtime. Not the thought of some uniformed thug walking past at any moment, pushing the door open on this flagrant breach of security.

'If you come to the debate, Miss, you can give the scientist's point of view. Set the record straight.'

'Yeah. You can tell us what your mice are thinking about while you're fiddling around with their brains.'

I watch James slump back into the chair and push off his trainers. He's wearing a Fred Flintstone hairpiece and a tee-shirt that says BIG IN NORWICH. His lips are dry, and there's a tender colour in his cheeks that hints at childhood embarrassments. His eyelashes are long and dark. A mole on his right cheek is the mark of a perfect arrogant beauty. I've heard this tone of voice before, of course: the slick automaticity of the outrage, the wince in his cheeks as he hurts himself on the words. No doubt the people who firebombed an empty storage room in the East Wing had it, took it with them to their Conscience meetings to argue for a better world without cruelty to animals. But James doesn't seem the sort who would act on his convictions. He's just testing me, pushing on the edifice to see if it'll break. He wants the easy kick at the cruelty of animal research, but he hasn't the heart, or the arguments, to see it through.

'Like I say, in this lab we're mostly using transgenics. We don't have to tamper with their brains at all: we let their genes do it for us.'

'Don't you have any doubts about that?'

He stares at me, sensing a weakness I didn't know about. 'Sometimes,' I say.

'So are they conscious when you're fiddling around with their transgenics or whatever?'

'That depends on what you mean by conscious.'

I wish he'd look away now. I like to think I can hide it, by speaking when I'm spoken to, smiling back when people smile at me, and maybe giving a little obligatory blush when it's a man. But then, out of nowhere, someone sees right through me, notices how I stumble over a response to a question, or leave a glance out of a window hanging a half-second too long. That feeling of being centred, that X that's supposed to mark the spot of the soul: it gets shown up as the nothing it is. James has scented it, the doubt that's at the heart of me. It's like I've thrown open a door onto a

party you can hear from the street, only to show that there's nothing there.

'I mean what you mean, Dr Churcher. I mean what it feels like to be alive. To experience the amazing qualities of existence. I'm not talking about neural pathways or bits of the brain working together in harmony. I mean what it feels like to be you, Dr Yvonne Churcher. Age thirty-something. Possibly single. To be that person, in this room, right now.'

I redden, and hate myself for it.

'Here, in this room, is not really the place to discuss this, James.'

He holds the gaze. It's too determined; its need to embarrass me is too much on show. But I find myself yielding to it, in a kind of admiration for his guessing the truth about me. He has me in his gaze, that cool, fascinating fixedness: not fighting me now, more like what comes after fighting.

'You take it to pieces, Dr Churcher, and then you can't put the pieces back together again.'

I laugh. I know I shouldn't, but I can't help it. It's a mid-brain reflex, some neural cluster buzzing some other neural cluster, and going nowhere near that mythical centre, whatever it is that's supposed to be me. He's blushing now, scorched by an older woman's mockery, and I can feel the tingling dread that tells me that I've gone too far. He's hauling up the smile, hardening it, putting a bit of menace into it, a clench of anger. It's too hot in here. All the doors and windows sealed, and electronic locks on all the doors, and just the two of us trapped in this moment, fighting for air.

It's true: I do doubt myself. Not in the way that I would doubt whether I could climb that hill or make that person fall in love with me; it's more like doubting the 'I' that's

supposed to be doing the doubting. I use this word, this feathery personal pronoun, like you might say the name of a foreign town you're headed for but have never actually seen, hoping the act of utterance might bring it closer. But I don't believe in that town. I never did. That feeling of centredness, of me-ness, that is supposed to keep you rooted in your life: well, it passed me by. I have this fantasy that I'll do what Gareth wants me to do, I'll take the thought-helmet and put it on, dim the lights and let everyone see what's going on inside. There'll be the low-level buzz of life-or-death routines, the reflexes that keep the machine working. The Lorenzo Circuit will be flickering, knitting together my past and future selves. As I turn around to see James sitting there, there'll be the swirl in the back of my brain corresponding to the sight of him. But then he'll ask me again, 'How does it feel to be you, here, now?' And suddenly the evidence of my existence will be gone. I'll be back to being a network of activity, one neural cluster buzzing another neural cluster, one lot of bio-electrical traffic taking the ring-road around the soul; one deluded meat puppet sizing up another deluded meat puppet and wanting to fight it or fuck it or whatever. 'What about how it feels?' James will ask me. 'There must be something that it feels like to be you.' I'll shrug and say that it feels like this. You sitting there with your fading blushes and your day-old stubble, wanting to fight me or fuck me, both, I don't know. Knocking at the door, trying to work out why there's no answer.

Calling my name.

Wondering why there's no one at home.

## CHAPTER TWO

### Forest Glade 7



He's on the stairs ahead of me. Gareth left ten minutes ago, saying he needed to slip away early so that he could get his speech ready for the debate. There's no one else on the stairwell. I see James on the third-floor landing, peering at the iris scanner that controls access to the maximum-security areas. He flips out his phone and films the scanner for a few seconds, and then glances up at the CCTV camera which eyes him from a safer reality. He pushes on the door, recoils from its solidity, and frowns at it as if it had broken a promise. I'm watching him from one flight above. It feels wrong to be spying on him, but I was the one who let him up here. If I've got a Conscience activist in my tutorial group, I need to know.

He carries on down the stairs. The lift doesn't even stop at this third floor, unless your access privileges reveal it for you on the control panel. You wouldn't know that this research floor existed unless you'd worked out the architecture from the outside. This is where the Lorenzo Circuit is being pieced together, neurone cluster by neurone cluster, to make a map worth — to our rivals at least — a price that goes beyond money. If James were with Conscience, this honeycomb of sealed rooms would be top of his target list. As I pass the iris scanner, walking fast to keep him in sight, I feel the hum of the secrets it is protecting, its silent, massively automated efforts to stop

certain facts from becoming known. At the second-floor landing, James increases his pace, all at once in a hurry. By now, the grey stairwell holds a wash of daylight from the windows on the lower floors. I can hear his feet clattering as he skips down the last flights of stairs and through the door into the atrium. If I run, he will hear me. Betas buzz around, yabbering into mobile phones. I have to push through the queue for the coffee cart. Someone stops me with a question about an assignment, and by the time I've shaken her off James is already out of the building and crossing the concourse by the boarded-up windows of the East Wing.

Outside it's the slanting light of late afternoon. A couple of contractors' vans are crash-parked on the kerb outside the East Wing. A radio blares, but no one is working. James walks past the scene with his Fred Flintstone mask jacked up on top of his head, his gaze set dead ahead, oblivious to the damage his fellow protestors have caused. I watch him catch up with a crowd of betas heading for a session in the Peer Review. He'll have to do his drinking quickly if he wants to catch the heritage steam service to Fulling, where the students have their colleges, in time for the debate. I'm tempted to follow him, but I'd rather make sure I'm there to watch him tonight, when positions have been stated and I can see which cause he's fighting for. I'm nothing, he told me. I'm not anything. If I want to know what that means, I'll have to be there when the shouting starts.

One of the contractors' vans is blocking the access to Libet Avenue, which is the way I go when I'm on my bike. The surface is compacted grit, fine for cycling, and at night there are lights in little ground-level turrets, security points every fifty metres. Then there's a maze of narrower footpaths that trace different routes back to Forest Glade, and less chance of being mown down by some proto-scientist on a thirty-speed racer. Down this way, gorse prickles your shoulders and red squirrels play pirates overhead. From odd clearings you can look up at the

treehouses at the top of the rise, paused like tripod aliens taking a break from conquering the earth.

Today I'm walking. This morning I stood on the roof of my treehouse and realised that I needed to pace it out, leave these jittery thoughts scattered among the undergrowth, and feel the certainty that only the footsore rhythms of a long walk can give you. A feeling is in me, a conflux of internal states that I call a feeling, and at a certain point it'll turn into a thought, and the conscious machine will start believing. Something has already tipped off my endocrine system; I can already feel the panic that will ripple out. What surprises me is the lovesick feeling that drags it here, a soft buzzing nervousness, all that adrenaline and noradrenaline licking at my insides and twisting me out of shape. Thinking's a gut reaction, rooted in the heart, the large intestine, the adrenal cortex, and only doing its conscious work in the brain. Hot intelligence, Mateus used to call it. His excuse for never losing an argument. If you went against his theory, you went against him.

*Come to Florida. Whether it's golf, fishing, or old-fashioned sunshine and beaches, we can help you to find the new life you've been looking for.*

Hot intelligence. That's what was bothering me last night, when this video message came through. Alone in my treehouse, curtains open to the blackness over the forest. The wind tonguing the flue of the stove, a reddish glow from a hollow stash of embers as fragile as a house of cards. I logged on and saw the shimmering lilac banner of Des\*re, flickering like a flag in a virtual breeze. Another mouse-click or two and I'd be getting a detailed rundown on the items traded, the webcam trails to obscure locations, all the clues and red herrings of this obsessive networking game. The welcome banner gave way to a night sky. Each new message twinkled in the firmament like a star. Some people think I overdo the graphics, but I want the full experience, especially when the rest of me is falling apart. There was

one new star, brighter than the rest. The sign of a new trader, travelling under maximum anonymity. Once I'd started trading with him I would get to see his icon, details of his avatars and perhaps even a clue to the flesh-and-blood gamer behind the mask. But for now he was a stranger, casually setting my heart on fire.

I clicked on the new star. It exploded into a cam-feed of a windy beach under a grey sky. A self-conscious black woman, clearly doing a favour for a friend, was explaining why she was glad she'd picked a realtor to manage the purchase of her condo on Anna Maria Island. Then the movie had been edited, and another voice dubbed onto the soundtrack, speaking through her lips. *Even if you lost it in the dark, you could try looking where the light is.*

I only know one person who talks like that. At least, I used to know.

I looked away from my wallscreen. I saw the cream sofa with chocolate stains on the cushions, stacked with essays waiting to be marked. His photograph on the bookcase, his Sansom car park swipecard and ID badge. That pile of dog-eared journal articles which he never wanted anyone to see. How had he tracked me down? He had his settings configured for maximum privacy, but he must have known that I would see through them. I made myself visible. I could see his icon now, coyly shaded to grey. A Portuguese guitar trapped behind the bars of a cage. It was Mateus alright. My gorgeous, suffering fadista. He tore my heart out, but it was he who sang the sad songs. Mateus who thought he had a monopoly on hurt.

I went to bed shaking. Why had he bothered to come looking for me? This morning, as sleep and not-knowing poured off me, it made no more sense than it had last night. Which is why I'm out here now, on my own two feet, hoping that this fresh March air will shape some common sense. Trusting that my footsteps will dislodge something, set the thought free.

*Even if you lost it in the dark, you could try looking where the light is.* But where is the light? Where is he hiding?

The spruces reach up into the blueness, scaly branches still rimed with frost. Needles sag, too heavy for this altitude.

He wants me back. Or else he wants me to hurt me all over again.

It's been two years. In all that time I didn't know if he was alive or dead. He never had the courtesy to tell me.

Oh, my dark man. It takes its time but it breaks eventually, and something in the heart region shifts bluntly to one side, and the thought is conscious, here to stay.

He's back. Mateus is back.

Florida is where the biennial meeting of the Association is going to be held. The first chance I'll have had to see him for two years. Since the last meeting of the Association, in fact, the hell of Quebec City. He's inviting me, the arrogant bastard, as though a meeting of eight thousand neuroscientists was somehow going to be Mateus Pereira's own show. The Pereira Effect was big, but it wasn't that big. I'm supposed to be presenting a poster about my research. He'll know by now whether his own submission has been accepted. The business of neuroscience has arranged it that I'll see him there. All that stuff about buying a condo and setting up life together is purely his sick joke. I'll be in Tampa for five days, and then I'm coming back home to my lonely life.

The thought bounces and shatters, shedding more of its mortal heaviness, and I can hear my own voice in the silence.

*Try looking where the light is.* If only it were that simple.

I wonder what he's working on now. No doubt he's still toying around with his human-machine interface. Trying to persuade silicon chip to speak unto neurone, that kind of thing. It wouldn't be Mateus if it wasn't breathtakingly ambitious. But if anyone could make the impossible happen,

it would be him. With a little help from his employers, perhaps. He was already busy with the interface when he was working for Sansom, back when we were together. Is he still on their payroll? I could never find a trace of him, not anywhere. Last night, after his message came through, I sat and called up the citation record for his famous paper, “Anomalous conductivity responses in non-organic tissue”, which he published in *Neuroscience* a few years before we met. The article that first described the effect that took his name, and cleared the way for technological advances in everything from sensory enhancements for the blind to control of prosthetic limbs. Referenced in just about every article published on the topic in the last decade. I was going to print out the full list of citations and scrutinise it for evidence that he still loves me, that he’s trying to communicate with me through the chain of influence the Pereira Effect has left behind, like you might track down a film star at a party just by following the trail of starstrucks who are still whispering his name. But there was nothing. If he’s still in the business, he hasn’t been publishing. Sansom have research centres all over the world. He could be holed up somewhere in the tropics, working on a project they don’t want anyone to know about. He could have planned the whole thing. Disappear for a couple of years, make out that you’re dead, and then jump out to give the grieving ex the fright of her life.

There’s a crashing sound in the bushes to my right, and I startle, my heart in flames.

Sansom want the map of the Lorenzo Circuit. The knowledge of what goes on in my building would be a gift beyond price. The Executive keep telling us that we cannot trust anyone. And that, if he really is back on the scene, means Mateus as well.

I stand, halted, watching for where the noise came from. My head is spinning from the climb and the oxygen that’s been forced through me. The undergrowth keeps its

counsel. The ferns swirl, set spinning by motion after-effects. I must have startled a pheasant or something. But nothing flew up; whatever it was, it's still in there. Shapeless, nameless, whatever my fear wants to make it. Thinking is a rush of blood, a panicked jumping to conclusions. Not a person, though, not this far out. Just let it not be a person.

Up ahead, the trees shrink back from the path. As I hurry around a corner I can see the massive steel supports of the first of the Forest Glade treehouses. They trudge in pairs up the slope; mine is Number Seven. I can see that they've delivered my firewood and left it next to my winch. No neighbours for me since the woman in No.8 failed her PhD, so my comings and goings are nobody's business but mine. But that also means that I'm alone out here. Right now, that isn't the comfort it would usually be.

I pull on the heavy beech door and drag the boxes of firewood into the winch. I tap in my passcode and feel the solar-powered motor jolt into action. Everyone has their ritual of homecoming; mine is this smooth electric ascent. They've fixed the problem with the elevator transport. We might be one of the more distant outposts of the Lycee, but they try to keep this particular social experiment running smoothly. There's a special division dedicated to the treehouses, to prove that their commitment to the project is still strong. See, say the animated graphics of the Forest Glade website, these fourteen huts on stilts ('built in 1999 to demonstrate the Lycee's commitment to sustainable twenty-first-century living') haven't been a complete waste of Federation grant-money. Half of them are empty now: people couldn't stand the height, the morning bird-din, or the way the treehouses were designed to sway in the wind like streetlamps — an essential safety feature, of course, but disconcerting when you're on your own in your first week of occupancy and the storm is roaring down the dale like the end of the world. One careless post-doc actually managed

to fall out of his—pissed after a Sunday session at the Peer Review, and lucky to be in one of the little fifteen-metre ones and have his fall broken by a forgiving rhododendron. Mine is the grown-up version, though: if you fell from here it would be like one of those dreams you're never meant to be woken from, a down-the-rabbit-hole flypast of your life's unfinished business, with the things that really matter to you ranged like lost treasures on unreachable shelves, safe from your dreamy grasping.

I need to get this firewood in before it gets dark. I ride the winch all the way to the roof, propped up awkwardly in the narrow floor-space left by the boxes. When I push open the door and step out into the cold air, it's like emerging from the roof of a submarine, surfacing onto a sea of brightness, one brave survivor inheriting the world. The silence is total, the kind of stillness that makes your own thoughts audible, and the view breaks your heart. I'm thirty metres off the ground, on top of the capsule of larch and Douglas fir that houses me and everything I own, pretty much the last thing to break the forest canopy until it reaches the fine print of the Eskdale moors, that visible blueness on the forty-mile horizon.

The bunker is in the corner under the wind turbine. For the moment the white sails are motionless, frozen in a turn. There's not a breath of wind. Right now my treehouse is draining power from the earth, the back-up grid under the forest soil, thirty metres below. At the same time the solar cells are heating water, the idea being that all these sources of energy will provide enough hot water later for a bath. I'll need this firewood in the morning, when I awake in the fog and the whiteness outside the windows will make me think I've died and gone to heaven. I can see that they've sent some good stuff. I like these hard bits of ash, the historic feel of them, as though they'd witnessed things in their lives. Split one and you'll see how its heart is pinky-brown, like it once had blood flowing through it.