

**SELF-WRITING
IN THE AGE OF THE INTERNET:
A NOVEL AND EXEGESIS**

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Abstract

This thesis consists of a creative work in the form of a novel titled *The Golden Age of Autobiography*, and an exegesis titled ‘The Playful Panopticon: Self-Writing in the Age of the Internet’.

In combination, these works address how online platforms function as technologies of selfhood. In particular, the central questions addressed by both creative and critical components are: what are we aiming to achieve by documenting our lives online, how has this changed over time, and what forms might online self-documentation realistically take in the future?

‘The Playful Panopticon’ takes the form of a chronological study of three decades of self-writing practices – and scholarly approaches to those practices – in online spaces from the mid-1980s to the present. The focal point of this exegesis revolves around the tension between ‘truth’ and subjectivity in online spaces, and how successive attempts to resolve this tension have resulted in the emergence of social networking services like Facebook as dominant environments for producing, reading and disseminating ‘everyday autobiographies’.

By synthesising the work of multiple generations of scholars and examining recent trends in online self-writing, ‘The Playful Panopticon’ expands on the work produced by Sherry Turkle and danah boyd to offer new insight into how online spaces enable the production of ‘digital memoir’.

The Golden Age of Autobiography continues the lines of inquiry opened in the exegetical component, but extrapolates to explore the implications of possible future trends in online self-documentation. In particular, the novel examines the emergence of lifelogging technologies designed to further automate the collection and dissemination of data about the self. Told from the perspective of JJ Bungard, a boy who has spent the majority of his life consuming his father’s networked recordings, the novel raises questions about how emerging recording technologies will be utilised by individuals to construct and share the ostensibly exhaustive, ‘authentic’ and ‘objective’ narratives of their lives.

Structured in the form of a bildungsroman, the novel explores three generations of the Bungard family: the protagonist, the viewer of a recorded life; his father, a lifelogger; and the protagonist’s grandfather, the creator of the lifelogging platform through which the father’s memories are shared. The relationship between these characters is designed to encourage the reader to

reflect on the conflicting desires of those who construct and utilise digital technologies of selfhood.

Thesis Declaration

I certify that this work contains no material which has been accepted for the award of any other degree or diploma in my name in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. In addition, I certify that no part of this work will, in the future, be used in a submission in my name for any other degree or diploma in any university or other tertiary institution without the prior approval of the University of Adelaide and where applicable, any partner institution responsible for the joint award of this degree.

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CREATIVE WORK:

*The Golden Age
of Autobiography*

Part I:
The Past and the Present

Wikipedia: Memoriae

The Memoriae is a small, head-mounted lifelogging apparatus manufactured by Autobio, which captures a stream of high-definition video and sends the recorded footage to the Vault, a secure cloud-based storage database. A user's Memoriae may subsequently be paired with another user's Vault to receive a continuous stream of time-shifted video.

Computer scientist Archibald Bungard, pioneer of black-hat spam email software Deliverwhiz, reportedly began working on the Memoriae to document the life of his son, Jay Bungard (now CEO of Autobio). It has been estimated that Archibald Bungard worked on the Memoriae as a personal project for more than twenty years before commercialising the hardware.

The Memoriae system is well known for its quirks. Prior to being paired with another user's Vault, the wearer of a Memoriae may decide at which point in time to begin viewing the other user's stream, but after pairing, the streaming footage may not be paused. In an interview with Wired, Archibald Bungard spoke of the importance of this design decision, stating, "It is limitations that define the human condition. The problem I wanted to solve was both simple and unusually complex: how do you share a full life with another? Not just the parts you think you'd like to share, but all of it, everything".

The question of how recorded Memoriae data is used by Autobio remains controversial. There have been multiple reports that Autobio has been 'training' experimental machine-learning systems on users' recordings. However, Autobio representatives maintain that all recordings are anonymised, and that its machine-learning technologies are designed solely to improve the Memoriae user experience.

While over five hundred million users are actively lifelogging using the Memoriae, Jay Bungard's son, JJ, is believed to be the first user who has spent the majority of his life viewing Memoriae recordings.

Spoilers

The place I like best exists less than a centimetre from my left eye. It hovers there, always shining, waiting for me to flick my pupil up and peek in. My father's past lives there – his world of twenty-eight years ago.

I can hear the long-ago, too, in stereo, through buds wedged tight in both ears. Extinct birds squawk and dead dogs bark. On the news, I hear stories about water lapping the ankles of teenagers in Tuvalu. Now, I'm guessing, the islands must be gone, submerged. Whole geographies must have disappeared in the years between the then and the now.

In my present, things barely change at all. Every day in my memory fortress is as similar as can be. No surprises. I have a door, and a floor, and a roof, and a mattress, and that is very nearly the extent of it. Beside the door, cans of food substitute and cartons of bottled water are stacked neatly, and beside them, there is a bin full of empty containers. As long as the food substitute and water keep coming, I'm okay.

There's a war going on, in the past, in some far-off place. Slowly, though, it's getting closer. Through the earbuds, I hear talk of it, in hushed tones, as though the enemy might be listening.

"This could be World War III," my not-yet-father's friends say. "This could be the last war."

I have my own theories about the war. I believe it has both begun and ended, and that the world is already halfway through its dance of forgetting. The only proof I have is that I am here. There have been ten thousand days of floods and fires and earthquakes and hurricanes, and bombs and disasters and cats up in trees – so much that has happened that once seemed so scary, but has now receded into faint collective memory.

I am watching a television show many seasons after everybody else started. The cliffhangers and plot twists I see have long since given way to others.

When I first heard about the war, I was worried that it might jeopardise my security, but my mother assured me that things were fine now.

"Everything is okay," she said. "Just not entirely the same as before."

"Stop," I told her, as politely as possible. "That's enough. I don't want any

spoilers.”

She smiled, then placed another few cartons of water by the door and closed it behind her.

FOMO

Today, I wake to the sound of two workmen out on the street, loudly arguing about paving supplies. The concrete on that section of the footpath would have hardened twenty-seven years and three hundred and sixty-four days ago. I can visualise it now: an almost perfectly smooth rectangle of cement, ruined by a single handprint in the corner, with the year carved out beside the vandal's initials. It's probably been replaced again. Nothing lasts for long.

“Grab it from the van!” one of the guys yells.

“Do it yourself! You're closer.”

“Fuck off!”

Their disagreement comes to me in a crisp 128 kilobits per second, filtered through ten thousand patented compression algorithms. The flat-packed data bounces from a data centre by the New Jersey turnpike to a satellite 35,786 kilometres above the earth, to a tower, to my parents' router, and into my earbuds.

In the past, the light through my father's curtains grows ever brighter, but in my own bedroom – my memory fortress – it's as quiet and dark as always. The soundproof walls and light-blocking blinds do a good job of holding the present moment at bay.

I grope in the dark for a can of food replacement and a bottle of water, while my not-yet-father lies in bed, in the final stages of REM sleep. I can see the time on his bedside clock – it will be fifteen minutes before his alarm sounds. For another quarter of an hour, I am truly alone. What I see now, through the device, are parts of my father's life he has never even experienced.

I try my best to keep my circadian rhythms in sync with my not-yet-father's, but it's difficult. Sometimes, on the weekends, he will stay awake hours later than I can, drinking cans of soda and playing videogames with his friends. No amount of willing can keep me from growing drowsy, and I will collapse on my mattress while the recording streams. When I wake, I will wonder: *what did I miss?*

At other times, though, I will remain alert long after my not-yet-father has drifted off. Even then, I will wonder: *is he really sleeping?* Or, if he is, *what is he*

dreaming of? I wish the technology could take me with him across the landscape of his sleep, as everything in his day returns to him in a nonsense jumble.

He is still in that world now, twitching and turning as he pushes through the final thickets of nighttime fantasy, and before he wakes I soak in as much of his world as I can. My not-yet-father wears the Memoriae on his head, like a miner's flashlight, and while he lies on his pillow, it records the ceiling. I stare through the viewer of my own Memoriae at the bedroom roof. Over the space of years, I have learnt to memorise it, while he probably has no recollection of it at all. This morning, I join the cracks on the ceiling to create images of circus lions cowering before flaming hoops, and cemeteries full of walking skeletons, and intricate underwater scenes with triggerfish and SCUBA divers. I wonder whether he is dreaming of some of these things, but I know that he's not. His inside world is impenetrable to me.

He sleeps for another hour, and out of the corner of the recording, I can see the sun as it passes above the houses outside. I continue looking at the ceiling, and imagine what might happen if everything just collapsed. I visualise the plaster crumbling, the girders crashing down. Would the recording stop, or would it keep going, even then?

Outer space

For a while, when I was very young, I tried my best to juggle past and present. Often, this led to minor catastrophes. I would find myself so distracted by my not-yet-father's past that I would walk into walls or slip on riverbanks. Nothing a few band-aids couldn't fix.

When I was eleven, though, I found myself so engrossed by footage piping through the device – my not-yet-father spinning, spinning, spinning on one of the pastel teacups at Disneyland – that I stepped onto the road while the little man was red. I don't know why nobody was watching me – perhaps they were off in their own other worlds, too. The tram's bell was hard to hear over the din of the theme park piping through my earbuds, and when the vehicle's hard metal body first nudged my skin, I felt a rush of joy at first, as though I were finally there, feeling the past as fully as my father did.

Then, I was broken into crumbly jagged pieces.

After that, I stopped leaving my bedroom anymore. Nobody knew what to do, or what was right or wrong. The experiment had to continue, they agreed. This was all uncharted territory.

It's okay, though. It really is. Over the years, I have developed a system that allows me to live safely and responsibly, posing little risk to myself or to others. I have eliminated responsibilities, and compressed my own life down, making it small enough that it can sit alongside the version of my not-yet-father's life that dangles from my forehead.

My system is straightforward. It is based on the premise that a life can be vastly more enjoyable if you're not the one required to live it.

The system is one of asceticism. In meditation, it is integral to find an object, a place for the mind to wander. My object is a life held in front of me, with contours my own mind can trace. The fact that the life is somebody else's doesn't matter. It is having the object before me that is important.

I am watching my not-yet-father now, out on the soccer pitch. I see the meat of his thighs as he races forwards, his arms slick with sweat. His boots fleck mud as he digs them into the grass, then quickly turns to run into the opposite direction. I can't exactly see the way his body moves, nor can I feel it, but I

understand it is with precision. A soccer ball will appear on the verge of barrelling past, and somehow my not-yet-father will be there in front of it, drawing it into his control. Without looking down, he will move his feet in a way I cannot comprehend, and I will see the ball shoot off toward another player, impossibly quickly and smoothly.

I wish there were some way for the Memoriae to convey this to me – the feeling of fitness and health, and of the absolute mastery of a body. But it's not at that stage yet. Everything is still just sounds and pictures.

In my memory fortress, I try to replicate my not-yet-father's moves, out on the pitch, in the middle of training, scouts watching. As I do, I am aware, as always, of the disjunction between my not-yet-father's body and my own. My limbs are stiff. They have an almost perfect recall: six years on, and still they can't let the memory of the accident go. When I was younger, I was told I could train them to forget, but I didn't want to, and nobody could force me. Now, I have taught them how to be almost perfectly inert.

I shake my legs of their pins and needles and kick one foot out, swinging it in front of an imaginary ball. I can feel that the movement is imperfect – a shaky, inarticulate approximation of what I am seeing on screen.

Once, I learnt that when astronauts return to earth, they are liable to collapse because their bodies have rebuilt themselves for one reality as opposed to another. I think about how, yes, I too am an astronaut, floating in another space.

I put my imaginary boot to the imaginary ball, and the crowd goes wild.

Safe bets

Some of the most comforting moments in my not-yet-father's life are those that recur, over and over, with only the tiniest of variations.

One of my few possessions is a notebook, which I use to gamble with myself, making predictions on my father's behaviour. First I create a point spread, then I place bets, acting as both bookie and gambler. My payouts are meagre: an extra scoop of food substitute, two if the odds are really against me. If I lose, I go without. On my unluckiest days, I barely eat at all; on the luckiest, I feast.

As I watch my not-yet-father getting ready for school, moving through his early morning routine, I scramble in the dark for the notebook. I click the top of my film reviewer's pen, and a tiny red light spills from it, illuminating half the page.

These morning bets are the easy ones, the odds all deliciously close to 1:1. In the bathroom, for example, my not-yet-father brushes his canines front-side first, before twisting the brush and attacking his lower molars, then the top. I watch him in the mirror, through the *Memoriae*, furiously ticking off each action in my book.

When he showers, my father lathers the shampoo on first, making sure not to get any suds on the lens of the *Memoriae*'s camera, then picks up the bar of soap with his left hand, running it across his right arm, then down his right leg before switching sides and perfectly repeating the process.

I doubt he notices the way it all plays out. I doubt he could find any good reason to start with one hand over the other.

I admire the consistency, the narrative insignificance of it all. Most of my not-yet-father's actions, when viewed closely, are just repetitions, with minute variations that are smoothed out or progressively distorted over days and weeks and decades.

As my father showers, I pour a small amount of water from one of my bottles onto a sponge and run it across my own body, doing my best to pretend the water is piping hot and my room is filling with steam. There is a shower in the house, downstairs, but I rarely use it. When I leave my memory fortress, I step

into a world that is too loud and bright for me to process.

Highlight reel

Every so often, the firmware on the Memoriae updates. Usually, it happens while I sleep, but sometimes a dialogue box will appear and a tiny spinner will superimpose itself above my not-yet-father's memories.

This morning, after updating, I saw something new. In one corner of the Memoriae's projection, there was a menu. By darting my eyes and blinking, I could move through it, drilling down into the analytics of my not-yet-father's life to date.

An on-screen message from Autobio explained how it worked. The feature was part of a project designed to condense a life down to its essence, subtracting the tedious and routine, leaving only the memorable.

I read Autobio's copy: *If, when we die, our life flashes before our eyes, what is it that we see – and what is it that is missing?*

I wonder if I am the first user to see this message. Once, when my grandfather was still alive, the people at Autobio called me their 'alpha tester', and would see me regularly to ask about bugs in the software. Now, it all happens through the Memoriae itself, modal windows appearing every so often asking me to wink once if I like the latest feature, or twice if I'm having issues.

Before my not-yet-father woke, I scanned and blinked my way through the new program. I selected the option to view the concentrate of my father's life, three and a half minutes of every 'first' he had ever experienced. Too quickly, I watched it all go by: his first word, first step, first peal of laughter, first tear down the cheek, first "Close your eyes and blow out the candles!", first "We're here!", first second of silent awe, first "Never, *ever* do that again, you hear me?", first "Great job!", first pile of presents under first Christmas tree, first Easter chocolate tummy ache, first New Year's fireworks exploding in a pitch black sky. Then, later: his first pair of hands locked tight in tenderness, first shot on goal in first grand final game, first furtive sip of liquor with nobody watching, first inept and uncertain kiss. In between, I see his first glance, his first grope, his first bite, his first sip, his first touch, his first taste, his first cut, his first scrape, first glimpse of the sea, first touch of snow – every now familiar noun and verb appearing in my not-yet-father's world for the very first time, rewiring his neural circuitry to make

room for a world larger than he ever considered it might be.

Then, it was over: almost seventeen years of life collapsed into two hundred and ten seconds. Where was all the rest? Was every other minute just padding?

I blinked to the outtakes, and looked at the runtime of all of the moments so far from notable that they may as well never have been lived at all: 16 years, eight months, and seventeen minutes.

'Outtakes' are moments that have become completely dislodged from your subject's organic matter. Of course, none of these moments is superfluous. Outtakes are the scaffolding upon which the best memories are built. Would you like to view this in fast-forward?

I winked and the reel played a blur of my not-yet-father watching old sitcom reruns, staring at high school assignment prompts, and waiting behind the yellow line at Prahran Station before being squeezed in place on commuter trains on his way home from school. Over and over these images looped: average days repeating endlessly. Then, the screens: mobile phones and computers, flickering with words and pictures that meant nothing, that were all really just filler. I watched my young not-yet-father click and tap and scroll his way across vast expanses of lost time.

As the outtakes reel drew to a close, I saw my not-yet-father in the back seat of his parents' car. "Are we there yet?" I heard, a persistent refrain, pulled from interstate road trips, or asked at the moment the aeroplane is halfway across the ocean, whole hours away from landing. "Are we there yet? Are we there yet?"

"No, we're not there yet," I heard. "No, we're not. It's not far. We're very, very close."

Pop quiz

I do not go to school. Everything I know about the world comes through the Memoriae – through the eyes of my father.

I learn calculus by watching my not-yet-father doodle all the wrong numbers on grid paper, making my own corrections in my head as he goes. I learn about the Battle of the Bulge as my not-yet-father flicks his way through the designated history textbook on the family sofa. Even though he only half-skims the words, while directing most of his attention toward tormented cartoons, I do my best to focus. I know I am smarter than he is. I can focus my attention on study in a way that he cannot. He is burdened, after all, with the demands of his existence. He must make decisions about what to wear and how to act and why he should do anything at all, at every moment paralysed by the fear that a single mistake could undo all the painstaking work he's done to construct himself as a person. Those are not things I need to think about. I can ride on the coattails of his life, gliding through it on autopilot.

“Pop quiz!” my mother shouts, her voice muffled by my bedroom door. I watch as a piece of paper slides underneath, then crawl to pick it up. I click my film reviewer's pen and illuminate the top half of the page with the dim red light.

Mum's Physics Quiz. Question 1.

Which has a greater momentum: a train at rest or a bicycle in motion?

Bicycle, I scrawl.

Question 2. _____ is a change in momentum?

Impulse

Question 3. The _____ of momentum states that momentum is neither created nor destroyed?

law of conservation

My mother should know that I've been thinking about these things for years, since well before Mr. Cortes began teaching them to my father.

*

I slide the quiz back under the door and wait for my mother to get out her red pen, mark it up, and slip the results back to me.

Recently, I've been failing, more often than not. My mother wants to know why. I can tell she thinks it's my fault, that I'm lacking in motivation.

I don't know what to tell her. In truth, my not-yet-father has not been making my education easy. Lately, in the past, he's been skipping classes by handing his teachers forged permission slips. He sneaks out of school to smoke weed with the kids who dropped out last year to work in factories before realising, too late, that the factories had all closed years earlier.

"I promise I'll try harder," I told her, when she last sat down with me in the dark to go through my poor results. I could hear the skepticism in her silence.

"Is it... something he's doing?" she asked.

My mother doesn't know anything about the way my father was, then, before they met. Sometimes, she'll grill me for details. Last month, she asked me whether he had a girlfriend, and when I told her that he did, she gave me an odd look.

"That's strange," she said. "He never told me that."

Sometimes, she'll ask to try the Memoriae on.

"It's hard for me to take it off," I'll lie, and pretend to struggle with the clasps and latches. "I can't, sorry."

When she asked me about my bad test results recently, I hesitated. I didn't want to rat my not-yet-father out, but I needed to be honest – the way things were going, I knew, there was no way my marks would improve any time soon. So I told my mother about my father leaving his classes to sit around on the far side of park that overlooked the school, watching as his old friends rolled a joint and formed a circle to pass it between them. He would usually just pass the joint along whenever it reached him, and they would all ask him why he hadn't dropped out – why, in other words, he hadn't chosen freedom. I knew that sometimes he wanted to ask them the opposite – why they'd left school if all they were going to do is skulk around on the outskirts of it – but that it wasn't something he was allowed to put to them.

After I'd told her that, she'd left my memory fortress, and when I'd opened

the door a little, I could hear my parents fighting.

In Society and Environment class, my not-yet-father once learnt about Theseus' Paradox. The paradox was: if everything about you has changed, can you really be considered the same person as you were before?

I think my mother wonders this, too. It's why she wants to try on the Memoriae so badly. She wants to see her husband the way he was, when so many of his parts were different. She wants to understand how he's ended up the way he is.

*

Now, I watch as the physics pop quiz slips back under the door of my memory fortress. At the top of the page, my mother has written "100%!!". She's stuck smiley face stickers all over it, something she hasn't done for years. They're the scratch-and-sniff kind, which used to be my favourite. I liked the idea of creating a book of every scent in the world, and keeping it beside me in my fortress to use as a reference. My mother told me that wasn't really possible, and that most of the scratch-and-sniff smells were only loose approximations of whatever it was they purported to be. I told her that didn't matter, because I couldn't remember what the world smelt like anyway.

I scratch one of the stickers, a pineapple with a happy face on it. The sticker smells both acrid and sweet, but when I give it a lick, it just tastes like paper.

I wonder whether I should tell my mother that my results in the test were just a fluke, all intuition. My not-yet-father hasn't opened his physics book up in weeks.

61 Virginis b

It's strange what happens when you capture or detain time, and how hard it is for the mind to grapple with the idea that things can happen many occasions over, decoupled and spun away from the present. Sometimes, I think of all the stars at the other end of the universe that destroyed themselves billions of years ago, their old lights still twinkling for us, but extinguished in so many places elsewhere – dead from the mane of the Horsehead Nebula, but alive from the wildest flame of NGC 2024. We see our own sun as it was eight minutes ago, our days illuminated by the light of the recent past.

At other times, I think of alien beings, in a world trillions of kilometres away, huddled around a telescope trained on the grassy knoll, watching the bullet leave the gun and barrel its way into President Kennedy. In a world even further off, perhaps, Atlantis is submerging.

The universe is a time machine, but it doesn't work the way we'd like it to. The light containing our history moves through space, but only further away from us. For so long, we had nothing to halt its movement, nothing to hold and copy and release the light. Now, we can force light to keep reflecting back at us, and the same sounds to echo and repeat at will. We can record a star exploding, then scrub the footage to put it back together. We can do this infinitely, creating an endless reversing loop of explosions and re-constructions. We can speed it up, slow it down, light as malleable as clay. Still, we can't outrace the light that has already left us. We'll never see the waves of the Atlantic crash around the shores of Atlantis.

There is a planet called 61 Virginis b, a super-Earth twenty-eight light years away. If there were advanced life there, and they could stare back at us, they would see my father's life just as I do: the sun rising, throwing up its big solar flares. The light they would see would be true light, made of the same stuff that passed through the camera my father wore, while I am seeing sub-pixels flashing on and off. They would see something realer than what I see, but the difference is not significant. In most ways, I am closer to the 61 Virginisians that I am to anyone on earth.

Biscuits

My not-yet-father has a girlfriend with a bedroom full of furry stuffed toys and pictures of boy bands. They sit on her bedspread – with pink, blue, and purple My Little Ponies galloping into a rainbow – and gaze at one another, uncertain about what it is they are supposed to do. They have watched enough teen dramas and romantic comedies to have a rough outline, but all the in-between pieces are missing.

“Hey, um, why didn’t you call me yesterday after school?” my not-yet-father’s girlfriend mumbles.

“Oh,” says my father, picking at the band of his watch, a knockoff Rolex he bought on a recent family holiday in Bali. “I was busy, I guess. I had soccer training and band practice and lots of homework.”

“You could have texted. I missed you.”

I watch as my dad’s girlfriend starts absent-mindedly playing with her shirt, tugging at it to show glimpses of a Hello Kitty bra with hot pink straps. She wears a crucifix on a necklace that spins as she fusses, always returning to the same perfect cross.

My father moves his hand above his girlfriend’s leg, then drops it like a dead fish and leaves it there as though nothing has happened. Together, they sit in silence until there’s a knock on the door, and my father leaps off the bed and stands bolt upright beside a life-size cutout of a Hollywood hunk.

“Ann-Rita and Jay, biscuits?” somebody says, wobbling a plate through the now-open door.

“No thanks, Mum,” Ann-Rita says, and the hand with the plate retreats, but the door stays open.

*

Through the stereo hum of my earbuds, I hear Ann-Rita in her bedroom, now speaking to my father in the language of forevers, and of an impossible, eternal, and all-consuming love. As she talks, she builds a world and a future as she would desperately like it to be, constructing a fiction of my not-yet-father from

the cloth of doting, devoted celebrity heartthrobs. As she continues, with talk of romantic dinners and anniversaries and the imagined family they'll one day look over ("After school finishes, of course, and we've both gone to university"), I can hear my not-yet-father gulping, worried, perhaps, that her blossoming and blooming fantasy might be somehow contagious.

I want to tell Ann-Rita what I can see, from my position in the far off future: that eternity is relative, and a first love only looks endless because there's nothing to compare it with. Their relationship would end, and she will be devastated, but only for a while. Then, I could only guess, she would find somebody else to occupy her daydreams, and somebody else, until her capacity for romantic imagining was exhausted to the point of it intersecting with reality.

In the present, my mother has got it down pat. She's learnt how to spread her affection for my father thin enough that it can last for all the decades they've got left. On the rare occasions I leave my memory fortress and pass by them together in the kitchen, I can't help but notice all the details, even though I try my hardest to avoid them: the brief touch on the arm before breakfast, the kiss on the cheek after dinner, the conversations that precisely skim the surface to leave just enough unsaid.

I've already seen my young mother in the past, several times. The last was only a few months ago, on a train carriage. My father sat opposite her – he travelling to his school, she to hers. Her hair was dyed purple, and she was wearing a blazer with a lapel full of pins. My father skimmed through his phone, checking text messages, but I could see them glancing at one another out of the corner of their eyes.

Now, I wait to see her again, searching for her on the train or at coffee shops or house parties, standing alone or in a huddle of her friends, in her uniform or in civvies. When they meet, I wonder whether my mother will remember sneaking glimpses at my father, or whether that memory is one that is destined for her outtakes – just one glance at a teenage boy, lost amongst a thousand others.

*

Secretly, I am writing a book – a biography of my father. At the end of each day, once he has gone to sleep, I open an old laptop that sits in one corner of the room,

and do my best to consolidate everything that has happened in the past, giving it shape.

It's hard to tell what is important. As each day passes, the narrative changes, and I delete whole paragraphs from earlier entries. I write about the dark cloud of war that is spreading, and about my father's soccer career, and about the time he spends wagging school to spend with drop-outs in unfurnished basements. I see a hundred possible futures laid out for him: as a sports star, as a soldier, as a musician or a high school drop-out. There are certain things I know – things that have been spoiled already. I know that he will take over the family business, and I know that he will become the father of a boy called JJ who lives inside the past. Back when I lived with one foot in the present, I couldn't help but find things out about him. But it's the gaps that are most interesting. There is, after all, still so much that could happen to him between then and now.

My latest entries are about the relationship between my not-yet-father and Ann-Rita. I write about the time, several months earlier, that Ann-Rita sent my father a six-thousand-word love letter over email and my not-yet-father marked it as 'read' but later pretended he hadn't seen it, and about all of the times he tells her that his phone isn't working whenever she asks why he doesn't respond to her messages.

When I visited Nils, I showed him what I'd written and he handed me a printout of an online encyclopedia essay about attachment theory:

Anxious-preoccupied people tend to agree with the following statement: "I want to be completely emotionally intimate with others, but I often find that others are reluctant to get as close as I would like."

Dismissive-avoidant people tend to agree with the statement: "I am comfortable without close emotional relationships. It is very important to me to feel independent and self-sufficient, and I prefer not to depend on others or have others depend on me."

"Perhaps you should read *The Catcher in the Rye*," he told me, but he didn't explain why.

I told him my dad hadn't been assigned to read it, and he didn't read much that wasn't on his high school reading lists.

"I think you should read books that your dad isn't reading," said Nils. "I think it might be good to do that. But, of course, I'm not in a position to offer you

advice.”

The next week, Nils had a copy of the book for me, a red and white and yellow paperback with paper that was fraying at the edges, and I took it home and read it in the moments when my father was asleep and the Memoriae was filming the ceiling.

Case study

The only time I ever leave the house is to visit Nils. My mother wakes me early on Sunday mornings and drives me through the city to the clinic. The entire time, I keep my eyes glued to the Memoriae. I avoid looking out the windows – there’s too much room for spoilers.

Once, on the way, I did look out the car window, just briefly, and saw that we were in Carlton. I could see the Italian restaurants along Lygon Street, almost all of them just the same as I saw them in my father’s past – same faded banners, same seats, same tables. For one of the first times in forever, I moved my head around and looked at the outside world, deciding what it was that *I* wanted to focus on: the sky, the road, my mother sitting in what *would* have been the driver’s seat of the car, except that in the present cars seemed to do most of the driving themselves. I knew that I wouldn’t have the freedom to do this once I re-entered my memory fortress, with its light-trapping blinds and sound-trapping walls, and closed the door behind me. I turned away as soon as I saw a billboard advertisement, for some kind of futuristic dental product that eliminated the need for toothpaste. It was a trivial, minor thing, but I knew I was on the verge of spoiling things.

*

Nils keeps the lights in his room dimmed when I’m at the clinic, so that it’s like my bedroom and I don’t need to squint or wear sunglasses. Then, he pats a spot on his sofa to get me to sit down and asks, “Should we get down to it?”

I nod, and Nils begins asking the usual questions: *How many hours this fortnight had I spent inside my father’s past? In my subjective opinion what was the most significant thing that had happened in my own life? In my subjective opinion what was the most significant thing that had happened in my father’s past? Was I happy? Did I think my father was happy? Subjectively, did I feel happier when I felt my father was happier in his past?*

“And, if I was to ask you for a one-word description of your emotional state, it would be...”

I think for a moment, but I can't come up with anything. I tell him my thought about my father's bedroom roof caving in.

"Is there a word for that?" I ask.

"Yes. Something Norwegian," he says, and I can see the dim glint of a smile – or, maybe, a grimace – in the almost-dark, and he writes the word down without telling me what it is.

*

I don't know how old Nils is – somewhere in the murky space between youth and middle age, between my father's age *then* and my father's age *now*. He isn't a registered psychologist yet, but I can tell that when he is, he'll end up being the good kind. If he were presented with the option to experiment on rats by refusing to give them water until they finished a maze and pressed a lever, for example, I think he'd be the kind of guy who wouldn't do it. If he was asked to electrocute a dog to make it jump to the other side of its cage, and then electrocute it again until it stopped jumping, I don't think he'd do that either.

I hand Nils a USB drive with the latest version of my father's biography, like I do every week. He tells me I'm a good writer, that he likes the flow of my sentences and what he refers to as my 'modernist' style.

Sometimes, to keep things fair, he shows me what he's working on: the broad outline of his doctoral study, which he has now tentatively titled, 'For The Places We Have Never Known: the psychology, philosophy, and neuroscience of recorded lives'. The title changes every second week, and I suspect he's spent more time trying to figure out a compelling title for the study than he's spent on the work itself.

He tells me that the current title is based on a quote from a writer called Carson McCullers: "As often as not, we are homesick most for the places we have never known." He prints out an old black-and-white photograph of Carson McCullers and hands it to me, and I slip it into my pocket to take home and add to my stack of Nils' other paper trinkets.

*

In the past, my not-yet-father has just woken up. Last night, it was his seventeenth birthday party, and I watched him in his backyard sneaking shots of absinthe with his school friends as they huddled around a brazier to keep warm.

I stare into the memory as I answer Nils' questions, watching as my not-yet-father looks around the living room, which is scattered with sleeping bags full of friends who crashed after the party. Everybody is asleep, their sleeping bags rising and falling with the deep breathing unique to underage kids who have consumed too much alcohol and sugar. When he turns to Ann-Rita's sleeping bag, though, my father can see her staring at him, eyes half-closed, head rested against one outstretched arm.

She mouths, "Good morning", and they wriggle their sleeping bags close together.

*

After *The Catcher in the Rye*, Nils has started lending me other books from his library. Last week, it was a copy of a work by Sigmund Freud: *Dora: Fragments of an Analysis of a Case of Hysteria*.

"That's a case study," he explained. "Like what I'm working on with you, but... very different, as you'll see."

I read the whole thing quickly, in between breaks in my father's memory. This week, Nils asks me what I thought of the book, and I tell him that I hated it. Why did an old man think he could get inside a young girl's head? What made Freud think that he alone held the keys to understanding her?

"It seemed like Freud was the one who really needed to be analysed," I say. "But then the person analysing *him* would probably need to have their own head checked."

"An infinite loop of head-checkers," says Nils, almost to himself.

"It would have been better if Dora had written a case study on Freud, I think," I say.

"Perhaps *you* should write a case study on *me*."

For the second time this visit, I see the faint glimmer of a smile in the darkness.

What I like best about Nils is that he always tells me what is happening.

He's not the kind of psychologist who takes a lot of secret notes about his patients and then just sends them right back to their strange little misaligned lives.

The things he tells me about myself are always things I already know, which makes me think they must be true. Once, he suggested that I like the idea of looking in on things. It wasn't that I liked being *alone*, he explained, it was just that I preferred being around people who didn't know I was there. He told me he was like that too, and that sometimes his favourite days at the clinic were those when he could watch his other subjects at play behind one-way mirrors. On YouTube, he showed me a video of an experiment where children were placed in a room with a clown doll and had their behaviour examined from a distance. Some of them attacked the doll, throwing it around, trying to smash it to pieces. No matter what they did, or how hard they tried to destroy it, the doll would always bounce back upwards, a huge red grin plastered across its face.

"People can be different when they think there's no one watching," Nils said.

*

Today, Nils has given me *The Strange Case of Dr. Jekyll and Mr. Hyde* to take home and read. While I wait for my mother to pick me up, Nils works on marking a student's paper while I flick my eyes between the book and my not-yet-father's past. In the living room, a slumbering mass of teenagers nurse their first hangovers, the curtains still drawn. In the near-dark, the footage comes to me overlaid with a thick digital fuzz.

My not-yet-father stares at Ann-Rita, so close that his camera struggles to focus. They've unzipped each of the bags at the sides, then spread them over the top of one another.

Even through the grain and the blur, I can see that Ann-Rita's face is flushed, as red as the raspberry alco-pops she drank last night – the bottles passed around in the backyard, staining everybody's lips with artificial colours.

There's no movement for a while, and I wonder whether my not-yet-father and Ann-Rita are on the verge of sleep. Then I notice new creases beneath the fabric of the sleeping bags, with hand-shaped ripples rolling up and down.

"I'm not sure we should do anything in here," Ann-Rita says – but even so,

she rolls in closer.

As I try to focus on the book, I hear soft breathing from the past, almost too quiet to be picked up by the microphone on my not-yet-father's head.

*

In the car on the way home, my mother asks whether anything interesting happened with Nils. As always, I shrug and say, "The usual."

Then she asks, "Did your dad have a nice party?"

"It was okay," I say.

"Does he still have a girlfriend?"

A few nights earlier, I heard the sound of my parents arguing through the crack in my bedroom door. It happened after I asked my mother whether she had ever met Ann-Rita.

"No," I tell my mother now, still with my eyes fixed on the Memoriae. "Not anymore. It wasn't very serious."

Heat

Now, in the past, it is almost summer, and my not-yet-father is riding a bicycle down the street, heading nowhere in particular. I kick my numb legs in the air, pushing on imaginary pedals. It is a glorious morning, all the way back then – warm, slightly damp, and still. At the bottom of the Memoriae’s screen is a reading with all the vital statistics: the temperature, the precipitation, the wind’s speed and direction. These numbers rise and fall as my not-yet-father’s sensors suck up the weather, turning sunshine and humid air into machine-readable data.

I know that the map is not the territory. Some imagination is required to turn ‘35 degrees centigrade’ on a digital ticker into the conjurings of heat. Seeing ‘Precipitation: 70%’ on that dashboard necessitates me dredging up my own faint memories of the outside. The trick is pulling at just the right strings of memory, drawing in the tiniest of impressions – the touch of dirt in the hand, the taste of a strawberry, the scent of off milk – without reminding myself of what I’ve given up to remain here, in my fortress, holding the present moment at bay.

Are there any feelings of my own I can draw on now, watching as the honey light of almost-summer catches my not-yet-father’s head-mounted camera? The light arrives at an angle, trapping itself in one of the lens elements and refracting into half a dozen starbursts, arrayed in a neat diagonal row. *Yes. I can remember something like this.* I can remember jumping into a swimming pool, twisting myself, spinning and turning in the air. When I was upside down, I opened my eyes, briefly, and the light came through, in the same strange orange shards. It wasn’t a lens flare – just an old-fashioned trick of the light.

I couldn’t have been older than six, and my Memoriae wasn’t weatherproof back then, so I couldn’t bring it with me into the water. I had to store it away, bundling it carefully in a pocket of my mother’s handbag to keep it dry. Then, I swam in the public pool all day by myself, without my not-yet-father’s life to keep me company. It was okay, for a while. Great, even. I worked out how to belly-flop, using the shape of my body to turn the soft water into something that could burn. I asked my mother to stand near the diving boards with her old Casio watch and time how long I could hold my breath, face submerged, legs held tight, bobbing in the middle of the lap lane like a mushroom. I stared at the sun from

under the water, the bright light made bearable by the heavy concentration of chlorine which seemed to make everything bloom.

By the time I crawled out of the pool, my skin had begun to rub itself raw off my body in sun-burned flakes. After changing into a t-shirt and shorts, I picked the Memoriae up from my mother's handbag, then asked her to tell me what I'd missed while I'd been away. She told me she didn't know, because, of course, she hadn't been watching. She'd spent her time staring at me instead. My fringe held onto the pool water, then let it go in heavy droplets that dripped down my cheeks. I was glad for that stupid bowl cut, because it meant there was no way for my mother to figure out I was crying. An entire day of my father's had disappeared, unrecoverable.

I realise, now, that I have drawn this memory-thread much too far. I should have stopped mid-air, pre-splash, the light in my eyes, that brief fraction of a microsecond where my past and my father's past perfectly overlapped.

Twenty-eight years back, my not-yet-father is holding both arms arm out, gliding down the street. When I was a child, in the years before my accident, I rode a bicycle – back when the barrier between me and the world was more permeable. Of course, I crashed it often. Trying to get me riding a bike was just another silly experiment designed to probe the limits of multi-tasking and distraction.

As my not-yet-father feels the pale underside of his outstretched arms bake themselves in the glow of the day, I pretend to do the same, feeling controlled gusts of heated, recirculating air passing all the way up my fingers to my shoulders. I can't quite recall: is the feel of the sun like the feel of the hot air blowing through the roof vents of my bedroom's reverse-cycle system, or is there something else to it, some other way it conveys its heat?

One day, I know, I will be able to feel the air just as my not-yet-father feels it. I am waiting for that model of the Memoriae – the version that precisely renders everything, so that I don't need to dredge up my own rememberings to fill in what is missing.

I am waiting for other improvements, too: a version of the Memoriae that will allow me to enter my not-yet-father's head, extracting the internal monologue that is always hidden from me. Whenever I place a bet in my bookie's notebook and I lose, it means my not-yet-father is far from me, unknown and

unfathomable. I am waiting for the sensor that will turn my not-yet-father's mind inside-out so that I can see it clearly, his skull a Hieronymus Bosch triptych full of shadow creatures and tree-men, flames and dirt and perfect geometries.

*

On the street, a man scratches his arse as my not-yet-father cycles past. An old woman, thinking no one is looking, rearranges her bra to properly cover her large bosom. These are not the kinds of moments, I realise, that deserve to be set in stone. These are not the kinds of moments that a stranger should be scrutinising decades after the fact. But people don't get to decide what about them is captured and preserved. People move through one another's recordings, uncertain of their roles in the captured memories of those around them.

Sometimes, strangers will approach my not-yet-father, indignant. They will ask him about the Memoriae, but they're not truly interested. They already know what a camera looks like, and they can see its aperture winking at them, twenty-four times a second, bad-mannered and unapologetic. They don't want to be in front of a camera, not while they're doing their shopping, or breastfeeding their baby, or huddled in an alleyway with an illicit drug on their lips. They don't want the light that contains them to be captured, not when they're unprepared for it, and not when their body isn't set at just the right angle to the lens, hands on hips, face taut, and humming, "Cheese."

"It's illegal to stand there and do what you're doing," they'll sometimes say, as the camera keeps clicking, precisely and silently, and they will quote a provision in a statute that does not exist. "Taking pictures of strangers carries a high criminal penalty."

Sometimes, my not-yet-father tells these people the truth: that he is legally blind, and that the Memoriae is – at least in part – a piece of medical hardware designed to enable him to see. Nobody is prepared for this, and so these people always slink away, their shame replaying in front of me many years later.

>Go invisible

Last year, my mother entered my memory fortress and told me that my grandfather – my father’s father – was dead. Throat cancer.

“I’m so sorry,” she said to me, as I squinted into the light.

“Why did you have to tell me?” I asked, and she ran over to hold me because she saw that I was shaking. I flinched when she touched me. I’d forgotten what it felt like to be held.

“I could have found out later,” I said, talking into my curled up body.

My mother didn’t know how to reply.

“We thought it was best that you knew,” she said, finally, but she couldn’t explain why.

Now, when I see him in my not-yet-father’s past, my grandfather exists in a strange state. There, my grandfather is alive, dead, both, neither. Sometimes he speaks to me, looking directly at the camera on my not-yet-father’s head, talking to the ‘Watcher’ he knows will eventually be viewing the recorded footage. I can see him, but he’ll never see me – never again. All I can do is watch as the remaining parts of his life play out, counting down the months until I know, now, he will disappear from the recordings. My grandfather will continue to exist inside of my father’s memory for years, but then that loop will close, and he will be dead there, too.

Now that my not-yet-father is seventeen, my grandfather has become a hazier presence, drifting through the recordings less and less frequently. At the current rate of only a few minutes of contact a day, I realise, I will have only a handful of days left with my grandfather in the past before I reach a present without him in it.

*

Twenty-eight years ago, my not-yet-father stops by my grandfather’s home workshop and peers inside. It’s empty, and my not-yet-father pauses and walks toward the long, squat bookshelf at the back of the room. He thumbs through the fat, plain programming manuals, passing his hand across exhaustive guides to

languages designed for human-silicon communion.

There are no novels in the bookshelf, a product, perhaps, of my grandfather's fear of subjectivity, impreciseness, and the gaps stories provide that allow small untruths to sneak in. Even the most rigorously-constructed works of hard genre sci-fi and fantasy were too soft for my grandfather, their imagined worlds too easy to find fault with but impossible to properly falsify. There was no way to 'solve' most stories, no way to judge that you had understood them correctly and completely, no acknowledgement that you had untangled every plot point and uncovered every hidden symbol.

My grandfather had made his feelings about all of this very clear on the day my not-yet-father announced it was his intention not to become an engineer, but to study in the humanities – maybe philosophy, he wondered. He didn't mean it, I knew. He was just saying it to get a rise out of my grandpa.

"Well," my grandfather said. "You can do that if you want. But what a waste of talent."

I wondered what talent my grandfather was referring to – the Cs in Chemistry, perhaps, or the Ds in Mathematics. My not-yet-father's real skills were on the sporting field – a realm of endeavour that my grandfather was partially in favour of, because at least match scores were quantifiable.

Still, my grandfather was not entirely against fiction. There, at the very bottom of the bookshelf, my not-yet-father finds what I guess it is he's looking for: stacks of boxed up text-adventure games, all sun-faded and jammed together tight.

I can remember the nights spent playing these games with my grandfather, through my not-yet-father's memory, through the footage that had piped itself to me through the Memoriae. I can recall both of them sneaking down to my grandfather's home studio, pyjamaed and barefooted, my grandfather pulling another game from the shelf and presenting the floppy disk to my father like an old family treasure.

That first time, my six-year-old not-yet-father had run his fingers across all the titles on the shelf – *Zork I*, *Wishbringer*, *Trinity*, half a dozen different versions of *Adventure*. While he did so, my grandfather booted up an old Apple II that sat on a desk of antique computers. After a warming 8-bit blip and expectant mechanical *chunk chunk chunk*, the green-on-black monitor had shuddered to life,

strobing faint lines down the screen. Eventually, near the bottom of the screen, an ‘]’ prompt appeared next to a flashing white box, the computer seeming to revel in the inexplicability of its interface. As the game was fed in, the machine click, click, clicked, physically eating the thing up, mechanically loading itself into memory.

My not-yet-father moved through this other world by typing potential commands, some of which failed (*>Fly*, *>Go invisible*) and some of which didn’t (*>Walk north*, *>Examine table*) while I sat watching him.

I could see why my grandfather thought these kinds of stories were okay, even when most other fiction wasn’t. It was because the rules that held the text adventure together were very hard rules, framed as a set of puzzles for the reader, who moved through the story like a slow-running code interpreter, stopping whenever a false command was entered to modify it until the whole thing ran smoothly again. The frustration of repeatedly entering invalid directives would give way to great bursts of relief whenever my not-yet-father or grandfather managed to pull back to see a broader pattern, using the newfound context to close yet another loop. It was possible to win at a text adventure, and to solve it completely, or to break apart the narrative and see it as a web of clear and predefined possibilities. More than a story, it was a system.

I loved the text adventure games too. Often, even then, even as a child, I longed for some way to exert control over my not-yet-father’s life in some way, issuing commands through the *Memoriae* that would force him to take my own desires into consideration. I fancied him my conduit, moving through the world of the past in response to my orders. Sometimes, I would shout them out loud, telling my not-yet-father to “sit down!” or “leave the room!” or “do a handstand!”. On the rare occasion my not-yet-father did do what I wanted, I considered that a win, a victory for my complex and impossible brand of mesmerism.

My not-yet-father moves his hand over all of the games and then walks over to my grandfather’s workbench. He looks at the prototypical models of the *Memoriae* in various states of assembly, flanked by soldering irons and drill bits, perspex sheets and printed circuit boards. Staring at the sickly neon green of those logic boards, with their flash chips and CPU sockets stuck on top, I am reminded of a series of cityscapes, each component a squat apartment block or

house or office tower. On one of the boards, I see an element that is flat and wide, with little depressions down the sides, like windows. I think of it as a home, and imagine myself huddled inside. It seemed strange, but fitting, that ‘logic board’ and ‘motherboard’ were synonymous, as though logic alone could birth its own children, then put them to use immediately, finding just the right place for them to live within its system.

Redacted

Shortly after my grandfather died, my mother had asked if I wanted to read his obituary. I shook my head.

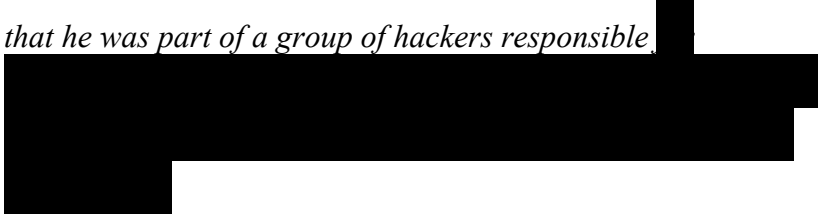
“Spoilers,” I explained.

“Of course,” she said, but she slid a clipping under my door anyway, just in case. I left it there for weeks, until the paper began to curl. When I picked it up, I noticed that my mother had crossed out anything too revealing of the present with a thick black marker.


***Archibald Bungard,
The Grandfather of the Data Self,
Dies at 85***

Archibald Bungard, who turned life-logging from a technological curiosity into a multi-billion-dollar industry, died on Monday in Melbourne. He was 85. For months, he had been fighting laryngeal cancer.

Many are more familiar with Mr. Bungard’s breakthrough invention – the Memoriae, a head-mounted recording and transmission apparatus – than the man himself. Ironically, perhaps, considering his obsessive interest in documentation, Mr. Bungard preferred a life outside of the spotlight. His early life remains largely mysterious, though there is evidence to suggest that he was part of a group of hackers responsible



Mr. Bungard’s experimentation with life-logging began in particularly tragic circumstances:



, but continued

with his son, Jay, who wore an apparatus designed by Mr. Bungard intended to correct his son's poor vision by relaying images captured through a camera to a retinal projector. Alone, this was a revolution in computer-aided vision, but Mr. Bungard saw much broader consumer applications for his technology. A polymathic thinker, Mr. Bungard developed several early machine learning techniques that, combined with the data accumulated from his son, enabled him to identify how apparently dissociated behaviours and routines affect health and future wellbeing.

Mr. Bungard's decision to commercialise the Memoriae came as a direct result of the advice of an acquaintance, venture capitalist Marcus Cunningham, who recognised the disruptive potential of Mr. Bungard's recording hardware when used in combination with his increasingly powerful interpretive software. Founded in Melbourne in [REDACTED], Autobio listed on the stock market in [REDACTED], after one of the most successful IPOs in Australian history.

Many regard Mr. Bungard as a revolutionary thinker.

However, others [REDACTED]

[REDACTED] *In particular,*
questions remain over the

[REDACTED] *Moreover, there is mounting evidence to suggest that long-term wearers of the Memoriae experience* [REDACTED]

Last year, Mr. Bungard's son, Jay, assumed the role of CEO of Autobio, in the wake of concerns over his father's failing health. However, investors are skeptical that the younger

*Bungard will be able to continue Autobio's innovation streak.
Three days after Archibald Bungard's death, Autobio's stocks are
down 18 per cent.*

I swore at myself for reading the obituary. Even though my mother had tried to cross out spoilers, she'd had no way of knowing what it was that I didn't already know. Now, the shape of my father's life had shrunk further.

Zen

“How would you feel if you were told the recording would, one day... end?” Nils asks me at our Sunday meeting. When he phrases the question, he speaks much more slowly than usual.

“It won’t,” I say.

I am confident of this. In the present, my dad is still wearing his *Memoriae*, still recording. The footage will continue until it covers his life in its entirety – and I will receive it all, until it covers over mine.

As I sit with Nils, in the darkened clinic, I watch through the screen of my *Memoriae* as my not-yet-father waits for a ride home from the city. As my father turns his head, I see the 86-line tram approach – the same one, perhaps, that will eventually smash my spine. If I keep watching long enough, I will see it all happen from his perspective.

I can almost picture it now, the ghostly younger version of myself – twenty-two years in the future for my not-yet-father, six years in my own past – proceeding toward the tracks, distracted by the life of an even younger version of my not-yet-father piping through the *Memoriae*.

I can see this younger version of myself as a spectre, both gone and yet-to-be. That particular child, and that particular body – prepubescent and androgynous, mostly healthy and whole – no longer exists in any physical form. And yet, there will be a time when this version of myself will return to me, in the form of the millions of adjacent pixels that blink out the glowing reds and greens and blues of my not-yet-father’s recorded life.

When I am born, in about eleven years’ time, my not-yet-father will become my father. I will enter his life as a character, viewed from the third-person, from a camera six feet above the ground, attached to my daddy’s forehead. I will watch, through my not-yet-father’s eyes, as he races to find my own eleven-year-old body, crushed and broken. When I get to that point, I will be able to backfill all the gaps in my own memory of that day, but the memory will also grow heavy, too rich with layers of recorded pasts and presents and futures, all converging at once.

“Are you looking forward to seeing yourself in your dad’s memories?” Nils

asks. “What do you think you will find?”

When I was younger, still with one foot in the present, I tried to create maps and graphs of the relationship between all of the different times I was living through, and had lived through, and would live through. It didn't seem so complex in theory, but when I committed it all to paper, the timelines ended up crisscrossing in ways that became convoluted and confused. I wasn't a time traveller in the traditional sense – there was nothing about what I was doing that broke any laws of physics; I was really just watching reruns – but what was happening to me somehow seemed just as impossible. It took decades and centuries and millennia for human beings to ease into the presence of photographs, and words, and cave paintings. Maybe, I thought, the mind still had to evolve to wrap itself further around what it meant to live vicariously, through a screen.

“I'm not sure,” I say. I can hear Nils scribbling.

I avoid looking at my father in the present anymore. I don't want to see what he has become – even the lines on his face, I know, contain too many possibilities for spoilers. I also know that seeing him means, eventually, seeing myself.

*

Today, instead of literature, Nils handed me a little book of Zen koans. I took it back to my memory fortress and read it under the light of a tiny book lamp.

Here's one I found:

Yamaoka Tesshu, as a young student of Zen, visited one master after another. He called upon Dokuon of Shokoku.

Desiring to show his attainment, he said: “The mind, Buddha, and sentient beings, after all, do not exist. The true nature of phenomena is emptiness. There is no realisation, no delusion, no sage, no mediocrity. There is no giving and nothing to be received.”

Dokuon, who was smoking quietly, said nothing. Suddenly he whacked Yamaoka with his bamboo pipe. This made the youth quite angry.

*“If nothing exists,” enquired Dokuon, “where did this anger come from?”
Suddenly, the youth was Enlightened.*

I knew that Nils had given me this because I had told him about how I thought of my system as one of meditation.

“How much do you actually know about meditation?” he’d asked, and I’d had to admit that I knew very little.

“Meditation isn’t about looking away from yourself,” Nils had said. “It’s about looking in, or at least clearing away everything but the present. That said, I’m not an expert, either.”

“So you’re not Enlightened?” I’d asked.

“Well... probably not. I feel like my path to understanding involves cramming as much knowledge in my head as possible,” Nils said, “but Enlightenment involves going the other way entirely – seeing reality as it is, with nothing clouding your judgment. But I’m probably okay with not reaching Nirvana, as long as I can complete my dissertation.”

Now, as I sit in my bedroom, I decide to briefly turn the Memoriae’s screen away. Then, I take both earbuds out and lay them on the ground. For the first time in forever, my father’s past disappears completely – but it’s okay, because I know that it’s still within reach.

I open my bedroom door a crack and just listen to the sounds of the house – the hum of the fridge downstairs, the slight gush of the wind through an open corridor window, the bathroom pipes knocking together with a metallic thrum. I reach my hand out of the room and look at the way the light falls in the corridor, and the way the carpet reflects light differently than skin does. I stand in front of my mattress, hold my arms straight by my sides and let my hands feel the touch of the still bedroom air.

“Ommmm,” I whisper. “Ommmmm.”

It doesn’t feel right. Maybe Nils was correct. Maybe my system doesn’t involve meditation at all. I swing the past back into view, and contentment washes over me.

Maintenance day

Once a month, in the past, my not-yet-father gives his Memoriae to my grandfather for maintenance. When he was younger, it was a ritual – my grandfather explaining to him how the cameras and microphones worked, and how the latest minor hardware tweaks would improve the footage my father was recording. Before the Memoriae had to be removed, my grandfather would show my dad how to use the soldering iron and I would hear a sizzle as the metal alloy melted, then watch the air in the room grow hazy until my grandfather remembered to turn his extractor fan on.

Now that he is older, though, my not-yet-father is much less interested in sticking around. He will unfasten his Memoriae and draw it carefully from his head, like an electronic postmodern crown, then hand it to my grandfather and head back to his bedroom to listen to music while my grandfather works.

Just before it happens, I hear the same clunky metal sounds before the memory goes wobbly. Then, as the unit is handed to my grandfather, I see something I rarely ever do: my not-yet-father's young face, not reflected in his bathroom mirror, not shown to him in a cell phone picture, but directly – and naked, entirely devoid of the aluminium lines of the Memoriae. His eyes are closed and he looks peaceful, for a moment. Then, my not-yet-father moves slowly away from my grandfather, hands outstretched, making his way out of the workshop by touch and memory alone.

Sometimes, when I'm alone in my memory fortress, arms and legs beset by pins and needles, the removal of my not-yet-father's Memoriae feels like a decapitation, as though my own torso has been ripped from me and sent on its way. Still, I know it was much worse for my not-yet-father. In the moments his Memoriae was being tinkered with, the world was dark and inaccessible to him.

It took me years to realise that there was no good reason for having my not-yet-father remove his headgear for any longer than a few minutes at a time. Most of the time, my grandfather had multiple units on his workbench, and could have just as easily swapped them out in one quick go, limiting my not-yet-father's sightlessness to the space of seconds.

As the Memoriae comes off, and before my not-yet-father leaves the room, I watch him rubbing his fingers, tapping and stroking the tip of his forefinger against his thumb. Secretly, though nothing is really secret, he has been slowly learning Braille, and I wonder whether the touching and tapping is a way of training himself, reading imaginary stories in the tiny bumps and divots of his skin.

The Memoriae could not capture the sense of touch, so it offered my not-yet-father a hiding place. It wasn't fair. My father hiding in touch meant hiding from me, concealing parts of his life in messages that would now pass through his fingertips, unrecorded. He couldn't have understood how much it would hurt me, because he rarely gave any thought to my eventual existence. I was not even a concept to him. Granting me, his unborn child, with access to his recordings was simply a tradeoff for the sense of sight.

Recently, my not-yet-father has been looking up articles online about a proposed bill mandating the surgical implantation of Cochlear implants in the deaf. There were protests in Melbourne, outside the State Library, organised by a group called 'Allies of the Deaf Against Cultural Genocide', but my not-yet-father knew he couldn't attend. People would ask about the Memoriae – why he was wearing it, what it did – and he wouldn't have any of the right answers for them.

*

When my not-yet-father leaves, the Memoriae remains on, and I am alone with my grandfather.

“So, are you ready, Watcher?” he asks, speaking directly to me on a unilateral line from the past, through the Memoriae that is now untethered from my father's body. “What are things like where you are, Watcher? Would you like a snack?”

My grandfather ambles over to a cabinet and takes out a muesli bar, then waves it at the camera. He pretends to feed it to me, crumbling it up and pushing it directly under the recording device, so that it appears as though it is entering my mouth, the oats and cereal passing through space and time and into my body.

I shake the pins and needles out of my limbs and move toward my food station, take a bite of meal substitute, and imagine the taste of processed oats and fruits and nuts, all glued together with honey to form the bar. I pay attention to the texture of it all, the way the cereal feels a little jagged on the tongue. The mind can get very good at this – crossing signals so that relationship between input and output is no longer a direct or straightforward one. My food substitute, when mentally reconfigured, can stand in for a chocolate cake or a slice of margherita pizza, or a turkey dinner, or lemon gelato. I try to draw on hazy past experiences, the faintest memories I can draw forth of my own sensory encounters, but with each passing day they slip further away.

“How’s that, Watcher?”

In my own present, in my dark memory fortress, I shudder at being spoken to, at my presence in being so plainly outlined and implied in the past. After pretending to feed me, my grandfather stares hard at the Memoriae’s camera, and I know that he is not examining a loose screw or a bunged-up piece of metal, but looking right at me through the camera, twenty-eight years down the line.

“Good,” I say – to him, to myself, to nobody. “Very nice.”

“Watcher,” says my grandfather, “before we get to the fun stuff, I’ve come up with a new idea for refining the system.”

I reach for my notebook and my film reviewer’s click pen. Separated by twenty-eight years, my grandfather and I worked together to define the elegant series of rules and restrictions that defined my life.

“Food has always been something of an issue,” he says. “The solid food substitute solution has never been ideal.”

My grandfather holds up a small catheter and a kind of feeding tube connected to a canister. When he presses a button on the cylindrical container, a tiny squirt of liquid spurts from the tube. It is almost clear, but with a slight tinge of yellow, the colour of healthy urine.

“With this, the process of sustaining yourself is now fully automated – so you can spend more time engaging with the recording, instead of fiddling with food.” My grandfather repeats the name of a company that he has contacted to set up a regular supply of the solution that would feed me, and that would be able to connect the catheter to the sewage system for automatic waste removal. “This

group has already been around for forty-three years – they specialise in medical technologies. They should be around in your present, too.”

I nod, even though I know my grandfather can't see me, and I think about all the ways he has helped me perfect the system. When I was much younger, he had spoken to me from the past about the importance of being alone, and when I was a little older, had instructed me on the specifics of how to keep my mind aligned with my not-yet-father's by avoiding contact with anything outside of the Memoriae that might lead me to develop my own unique thoughts and feelings.

I knew the catheter was an inevitable and obvious refinement. Ensuring that I could passively receive sustenance meant that I would need to move less, and be able to immerse myself in the Memoriae footage more deeply.

My grandfather leaves the recording device on his computer desk as he doddles to his workbench, where a series of Memoriae prototypes sit. On the wall of the studio, I can see one small framed photograph – an image of my grandfather smiling blithely as he holds up a sketch for the design for the first Memoriae, with my not-yet-father sitting next to him, in diapers, fat little arms and legs protruding from a squat neonate torso.

Now, my grandfather is back, with a Memoriae that looks nearly identical to the one my not-yet-father was previously wearing, which is still recording the footage that is streaming its way to me.

“When I make the switch,” he warns, “it's going to feel like moving from home video to watching a blockbuster.”

I think of the only blockbuster my grandfather ever wanted to watch: *Close Encounters of the Third Kind*. When he watched it on television with my not-yet-father several years earlier, the footage filtered second-hand through the Memoriae, a recording of a recording. After the movie had finished, my grandfather wanted to know whether my not-yet-father thought Richard Dreyfuss' character was a genius or simply mad, but my not-yet-father, then no older than fourteen, had just shrugged and told him he wasn't sure.

My grandfather moves back to his computer, to complete the migration from one unit to the other. As he does so, I begin to shiver in the middle of my dark memory fortress, readying myself for whatever is about to happen. Whenever the recording hardware improves, the entire world I inhabit instantly

increases in fidelity and resolution and for days, I revel in the crispness of my father's enhanced recordings.

My grandfather initiates the migration, and I am transported across the room, from one Memoriae to another. In many ways, my grandfather's workshop is unchanged, but it somehow looks more concrete, somehow both larger and smaller, as though reality has shrunk itself down to fit more of itself within my field of view.

"Wide-angle lens," my grandfather explains. "How do you like it? Does it feel like watching a movie?"

I want to tell him that it feels better than that. It feels as though there is now no medium, no intermediary, just a series of tiny beings dragging and heaving pure pleasure around the inside of my skull. My father's past now looks clearer and more vivid than my own present – the tiny parts of it I know. I am not sure how anything could be better than this. The world is not better than this – I'm sure of it. I do not want to leave. Do not make me leave. Do not make me leave!

Once, speaking to me through the Memoriae on another maintenance day, my grandfather had told me that the human eye could make out five hundred million pixels, but that the world went deeper than that, down to the level of atoms and quarks. It was analog, or so people used to think: flowing, continuous, prodigious, and endlessly complex. But if an end to the endless depths were discovered, it would prove the opposite: that the world was digital, and unspooled from a source code that was incredibly long, but not incalculably so. One day, he seemed to imply, I might see everything.

Until now, this was enough.

Apple Pie

On maintenance days, when we are alone together in the past, after my not-yet-father has left the room, my grandfather sometimes shows me what he's working on. He leaves the Memoriae recording as he codes, and I listen to the gentle clickety-clack of his keyboard as he walks me through it.

My grandfather's workshop overlooks my grandmother's rose garden, but I've never seen the room without the shutters drawn. I can see through the Memoriae that they've been stuck down with duct tape, so that no light whatsoever can escape into his code dungeon. I understand: it's just like my memory fortress. Perhaps, I think, when you are operating on the level of attempting to rewrite the entire universe out in code, actually *seeing* the universe outside, in all its complexity, could feel like a punch to the gut.

Sometimes, as my grandfather types, I close my eyes and just listen, pretending I'm in the middle of a downpour, every character he types another raindrop, hundreds falling every minute, every frustrated thump of my grandfather's fist on the desk a fantastic peal of too-close thunder.

"Watcher," he says eventually. "I want to show you something. I want to begin by informing you of the assumptions underlying this endeavour. If you agree with them, then we can proceed."

Every time my grandfather tries to speak, I can see him straining to feed his thought back through a sophisticated interpreter inside his head. He must have trouble shifting from a language of logic and sureness and absolute command to one that's fuzzy and open to endless re-interpretation.

"The first assumption is that cause is followed by effect."

I think about it – about how everything breaks down on the quantum scale, or so my not-yet-father learnt in science class, but that human beings rarely conduct their business with subatomic particles, and on a regular, *human* scale, it certainly seems as though most things have some order to them.

"Okay," I say, even though I know he can't hear me.

"The second is that in any sophisticated system, that which is recognised as 'random' is merely effect following a cause that is not sufficiently understood."

He places the Memoriae behind him, so that I can peer over his shoulder.

My not-yet-father doesn't really know the scope of my grandfather's experiments. He isn't interested. To him, the Memoriae is a medical apparatus, a hindrance – like braces, or glasses, or a hearing aid, something necessary but unpleasant. It is not, as my grandfather sees it, a grand experiment in capturing and understanding a life.

In a quick skim, my grandfather moves neatly through the first seventeen years of my father's past, scrubbing through his childhood, all the way up to what I'm seeing in the Memoriae today.

Then, on one monitor, he begins playing a memory. This one is tricky to place. In it, all I can see is that my not-yet-father is walking toward a door. His hands are in his pants pockets – they're bulky cargo pants with secret zips and oversized pockets, so I guess my father must be twelve or thirteen. Just before my father opens the door, my grandfather pauses the footage and taps a few keys on his clacky keyboard. I imagine raindrops.

After a few seconds, the fans on his server cluster beginning spinning. Then, on my grandfather's other monitor, some text eventually appears in very large neon green monospaced type:

Jay removes hand (left) from pocket (front top left, cargo pant). Jay moves hand (left) toward doorknob (facing west). Jay turns doorknob then pushes door open. Jay steps through doorway and into next room (west).

"The system has worked it out," he says, proudly. "This is a huge leap forward."

I try to figure out what has happened, but I don't quite understand.

"Oh," he says, recognising he's moved too far ahead of himself. "The first thing that's happened is that the system has managed to 'see' your father walking toward the door. It interpreted what was happening, converted it into text, then used swarm analysis to anticipate what would happen next."

"It predicted the future?" I ask, speaking to nobody.

"It figured out, from an accumulation of past examples, that whenever your father walks up to that door and places his hand on the doorknob, he is almost certainly going to subsequently open the door and walk into the living room. It can see four and a half seconds into the future!"

Now, my grandfather brings up another memory. I can see my not-yet-father's tiny hands outstretched, pushing a small bicycle uphill.

"Do you remember this?"

I nod, pointlessly. My not-yet-father's memories are as strong as the few I own outright.

At the top of the hill, my seven-year-old father turns his bike around, and takes a long, hard look down the incline. Then he gives his helmet (modified by my grandfather to accommodate my father's antique old recording hardware) a tug and hoists his leg over the bicycle's frame.

Just before my seven-year-old father can fly – and then unceremoniously land, hard – down the hill, my grandfather stops the memory. Another click clack and the server fans in the corner spin up again.

The text on the monitor has changed. Now it reads:

Jay rides red bicycle down hill (south). Front bicycle wheel meets rock (23 centimetres diameter, slate gray, round, contact type: rubber-to-rock). Bicycle moves west. Jay moves south. Jay moves south no longer on bicycle. Jay meets ground (contact type: face-to-bitumen). Jay shouts (88dB, no decipherable words, sound: "Waaaaahhhehfhiofhhhhlllll").

"Keep in mind," my grandfather whispers, "that is entirely a prediction. These computers do not have access to the rest of the memory until I load it in."

My father, now, will sometimes absentmindedly run a finger up and down the raised, smooth line of scar tissue that travels all the way up one ankle. If this system had existed then, my seven-year-old not-yet-father mightn't have been so reckless.

"The relationship between cause and effect is strong in both the examples I have shown you, but it is still a breakthrough." My grandfather sounds proud, defensive and paranoid, all at once. He looks around the room, as though the office might be bugged, a potential competitor listening. "The system can make many of these kinds of predictions. It works in real-time, too – but I haven't told your father anything about that, yet. Only a few seconds at a time, of course. Beyond that, things get too complex. Too many forking pathways."

Then, my grandfather turns to the Memoriae – to *me*, the Watcher.

“I’ve been calling the system ‘Apple Pie,’” he says. “Because figuring this stuff out is one of the most difficult AI problems there is – and, if you want to make an apple pie from scratch, you must first create the universe.”

Countdown

I thought about Apple Pie a lot as my not-yet-father went about his business. It reminded me of my own betting notebook, and all of the predictions I made about my not-yet-father's behaviour. Perhaps nothing happened by chance. As my grandfather suggested, maybe, if everything were properly tracked and collated and crunched, it would be clear that everything in life was predestined – trillions and trillions of systems interacting with one another, causing the future to unfurl.

Autobio's technology would be much more sophisticated by now. I wondered what they knew about my father, now – how much of his future they could accurately piece together. Days, months, years? Was his entire life already clear to them, his free will collapsed into algorithmic certainty?

I fiddle with the Memoriae's settings, blinking and winking to drill down through all of the options available to me. Eventually, I find an experimental feature called 'countdown timer'.

'Jay: 204,312 hours left', it reads. 'JJ: 569,408 hours left'.

When I check back later, the numbers are both smaller than before.

Talk shows

Once, when I was younger, before I left the world completely, I was the adorable poster boy for the Memoriae.

On talk shows, I would sit on plush sofas beside my father and the hosts would ask me what it felt like to look into the Memoriae. What did it *feel* like? I would babble like any five- or six-year-old would, and say that it was like watching a really long YouTube video that was sometimes funny but sometimes sad and sometimes both at once. Or I might say that it was like looking into one of those Viewmaster toys, except *waaaay* better. The hosts would laugh at how normal I made it all seem. Now, if they asked, I know what I'd say. I'd tell them that using the Memoriae felt like my younger father's head was a cave, and I was the hermit holed up inside, peering uncertainly out into a world that was more than a little terrifying.

Once I was asked, by a more daring talk show host, with impeccably coiffed hair, how I managed to live. It was a big question to put to a kid who still had most of his baby teeth.

"Hmm," I remember saying. "It's just like riding a bicycle." I never told them how often I would fall off my bike, distracted by the light of the past.

Of course, the truth was that I didn't know what life was meant to be – I had no point of comparison. Even though I had contact with the world then, it was minimal. I spent twelve or more hours a day in the past, sitting still and staring, and my brief excursions into the world were always managed and restricted. The life I lived always paled into comparison to the life I viewed.

When I was seven, for example, I could remember going out for gelato one evening with my parents, and it was warm and the gelato melted on my fingers. In my father's past, when he was seven, he went on vacation to Hawaii and swam with dolphins and won first place at his primary school's swimming carnival. The gelato melting on my fingers was my only lasting memory from that entire year of my life. Nothing else important happened.

*

I went on *Oprah* once, shortly before my accident. They didn't fly us to LA – there was a little studio in Melbourne where they would tape segments that aired in between Oprah's interviews.

On the drive to the studio, my father said, "You know the brief? This one's taped, not live. They'll be following us around, asking us some questions. They're going to store it for a Father's Day special. It's part of a series on inspiring father-son relationships."

When we were in the reception area, I saw a group of people huddled around with big black cameras and reflectors and boom mics. A woman in a pantsuit shook my hand voraciously and told me her job was to make women in the thirty-five to six-five bracket – "educated, and with aspirations toward *total fulfillment*" – want to marry my father, and mother me. "That's our goal with these kinds of pieces. Of course, it's implicit, always implicit."

"How much space will there be for the product?" asked my father.

The woman was wearing a badge that said 'Oprah Network Digital Talent and Content Coordinator' which wobbled as she nodded curtly and brushed an invisible speck of dust from her pantsuit.

"Don't worry," she said. "We'll focus on the gadget."

"The 'Memoriae'," said my father.

"Yes. Exactly. Long day."

Then, a woman with impossibly straight hair emerged from the scrum of cameramen and production assistants. The Digital Talent and Content Coordinator put a hand behind my father and me, and pushed us toward her.

She told me she was the reporter on the story, then gave a huge television smile. "Let's do this!"

My father and I followed her as we walked around a park, somewhere out of the city.

"Jay and JJ, you two have a bit of an unusual relationship, don't you?" she asked.

My father jumped in, smiling warmly at the reporter as he told her about the way the Memoriae was designed to break down the barriers between us.

"Sometimes I think JJ 'gets' me more than I 'get' myself!" he said, giving a big, loud chuckle. "There's something pretty special about what we've got. He gets to see the 'real' me when I was his age, which means he gets to see me as his father

and his friend.”

I looked around and realised we were already being filmed. A boom mic swung down and almost hit me in the head.

My father was relaxed. He knew the reporter wouldn't ask any tough questions.

“Is it kinda strange sometimes?” he said as we walked past a little pond in the middle of the park. “Yep. But I can't imagine our relationship *without* the Memoriae. It gives you this level of intimacy that's almost...”

“Ineffable?” said the reporter.

“Ineffable,” he agreed. “There's nothing deeper than our memories, so when we share them with just one other person we care about, it's like... you *know* that there's at least somebody out there that truly understands you, who truly knows where you're coming from.”

“How about you, JJ?” asked the reporter. The boom mic hovering above me dropped down a few more centimetres, and this time it hit me on the back of my head, and they needed to start over.

“Dad is me,” I said, nonsensically. Now that I was eleven, my weird speech patterns were no longer cute – they were concerning.

“JJ's a little shy,” said my all-smiles-for-TV father.

“Okay!” said the reporter. “Let's talk about memories. JJ, what's your fondest memory of your father?”

I tugged at my shirtsleeve.

“My past-dad or my now-dad?” I asked, and I could see the reporter was getting confused. She gave a huge on-screen grin, but I could see her straining. When a couple of the cameras panned away from her, an assistant rushed up and dabbed at her face with a handtowel.

“We got gelato, once,” I offered.

“Okay...” The reporter's smile looked like it was about to break in two, right down the middle. “Well, tell me more about that gelato! Do you both love ice cream?”

“My past-dad liked chocolate-mint,” I said, “But I'm not sure about my now-dad.”

The reporter raised an index finger. “One moment.” She turned to face the scrum. The Digital Talent and Content Coordinator stepped forward, lips pursed,

and they leaned toward one another and huddled.

My father stepped toward me.

“JJ... come on! You’re making things confusing.”

“I can’t help it,” I said.

I wasn’t involved in Autobio’s marketing strategy after that. My dad was okay about it, though I could tell he was disappointed.

“We helped sell a lot of Memoriaes together,” he said.

“Did we?”

“Thousands and thousands.”

*

A few months ago when I was visiting Nils, I saw a catalogue on the table at the clinic, advertising new versions of the Memoriae. There were chunky, branded models, clearly designed for children: one, bearing the Teenage Mutant Ninja Turtles trademark, took the form of masks that wrapped around the eyes, in bright purples and oranges and blues and reds. Another took the form of a rose gold tiara, with the camera discretely embedded in a tiny heart at the top of the crown.

The most advanced version, though, was a ‘His & Hers’ gift pack, enabling lovers to stream everything they saw or heard to one another in real time. It looked very different to the units my father and I wore: so tiny that it almost didn’t exist at all. In the centre of the models’ pupils, a tiny gold speck glimmered, like a diamante stuck to the cornea.

Pair a Memoriae with a friend or loved one, and your world becomes theirs. Constant contact, in four easy payments of \$289.99.

On the next page, there was a photograph of Einstein. Super-imposed on top, in chunky sans serif font, was written, “What if yours is the next...”, then, in much smaller type: “Just imagine if we could see the world through the eyes of the great artists, performers, thinkers, and doers of the past. Imagine if *your* child is the next Mozart or Madonna, James Joyce or Jane Austen. Wouldn’t that be a life worth capturing?” At the very bottom of the poster, in tiny type: “Autobio”.

I wondered if the world was now full of Memoriae wearers, half of them recorders and the other half of them receivers, like me: castaways, anchorites, ascetics, all holed up in a single small room they had made their entire universe.

Were there now enough high-fidelity recordings of people living that nobody ever had to go to the trouble of carving out their own difficult, duplicative existences? Did people flip in and out of their Memoriae feeds, the way their parents used to with cable TV channels? Perhaps some people watched exclusively, while other people filmed – some making another’s world their own, and some imposing their world on others.

If there were others, did they know that my not-yet-father and I were the first? Of course, there were pioneers before us – Steve Mann and Cathal Gurrin and Justin Kan, all the men that my grandfather regarded as demigods. I had met all of them through the Memoriae. They had stared back at my not-yet-father, recording him as he recorded them, with their own early head-mounted webcams and battery-powered glasses, and necklaces that clicked and flashed and sucked the world in.

Gimmick

Sometimes I would look over my grandfather's obituary and try to see if I could make out the passages my mother had blacked out. I must have been in there, somewhere. I knew that, in the world outside of my memory fortress, people were talking about me. On the internet, there must have been dozens or hundreds of videos and conspiracy theories about what happened to the boy who lived in his father's past. Or perhaps there was nothing. Perhaps people had better things to think about – like the war, or cryogenically-frozen people who were now being woken up, or whatever else was happening in the future that was really just the present.

My grandfather never wanted me to be part of the world. When I was younger, he told my parents that moving between past and present could contaminate things.

"It's simply too disorienting," he said. "We need to keep things simple."

I knew there was money involved, and complex deals between my grandfather and my dad that my mother must have been involved with, too. By this stage, my grandfather was old, and the prospect of his considerable inheritance must have loomed over everything.

"Archibald, you can't structure a child's reality around a gimmick," said my mother.

"It's not a gimmick," he'd say. "This is how many people will live soon."

"It's not how people anybody lives today, though. Only JJ."

There were fights and arguments about what to do with me. Once, somebody broke a vase.

"As soon as you're dead, we're switching the whole thing off," my mother had told my grandfather once, while I sat on the floor and gazed into visions of my young father swinging from monkey bars.

"It'll look terrible for the family business."

"I don't care about the family business. And Jay doesn't, either."

My father didn't say anything.

"I don't believe that's true," said my grandfather. "Even if so, you'll be waiting a while."

Now, I wondered whether my grandfather had set up his own countdown timer and had known exactly how long they'd be waiting.

Rat-a-tat

Ever since my grandfather died, my mother has been trying to get me out of my memory fortress. She wants me to leave the past. She doesn't understand that my system works.

Her attempts would always begin with a *rat-a-tat* on the door to my memory fortress, and a "JJ, listen, your dad and I have been thinking..."

Last week, she tried again. She told me she'd like me to come down for a real family dinner.

"Not just you rushing past in the kitchen on your way back to your bedroom, but a real, sit-down thing," she explained. "Not tonight. Not even tomorrow, but sometime soon – when you're ready."

I told her, as always, that I wasn't sure I would *ever* be ready. What would we talk about? What secrets would they reveal?

I knew, after all, that in practice it was almost impossible to avoid the nearly three decades' worth of spoilers that had nestled themselves in the space between then and now. Over the past seventeen years of my not-yet-father's life, the Twin Towers had fallen, regimes had been toppled, a robot had touched down on Mars, the global economy had collapsed, and the Space Shuttle Columbia had disintegrated in the sky. I knew there would be just as many surprises waiting in the years to come.

When I was younger, before my accident, it was easier for me to exist in the present. I didn't know enough about the world to pay attention to what was notable and what was different. Now, though, it would be difficult for me not to try to read my parents' faces for clues about the shape of world, and about my not-yet-father's future.

"Don't worry," she said. "We won't talk about the space colony."

I shouted at her to be quiet, but when I stopped I could see her grinning, sheepishly, in the corridor.

"Oh. That was a joke," she said. "I'm sorry. I... thought that was obvious."

Nothing about the present was obvious, though. That was the point.

My mother handed me a plastic bag. I opened it, and fabric spilt out.

"We thought you might like it," she said. "For the dinner... whenever

you're ready.”

I picked through the pieces of fabric: a nice collared shirt, some trousers, a gray jacket with too many pockets. Then, in the almost-darkness, I looked down at what I was wearing: a t-shirt advertising a band that was popular twenty-eight years earlier, stained and threadbare. There was never a good reason for me to dress up, because there was never anybody watching me.

“How about we pencil it in for next Tuesday?” she asked. “It’ll give you a date to work up to.”

I realised I had no idea what year it was, now, let alone what day. It would take me a little while to figure it out, adding twenty-eight years to the past.

“Today is Thursday,” my mother said.

“Okay,” I said. “Maybe Tuesday – but maybe not.”

I was aware that I had to keep my mother happy. After all, she was the one who kept my memory fortress stocked with food substitute, and it would be a while before I could figure out how to set up my grandfather’s idea for the intravenous drip.

“Okay,” she said. “That’s good enough for us.”

She closed the door behind her and left me in the dark.

Fancy dress

When Sunday comes around, before my meeting with Nils, I try on the jacket and trousers. I attempt to imagine what I look like, but it's difficult. After so many years in my memory fortress, I have come to imagine myself as a kind of apparition – just a ghost that haunts my parents' house, or a set of disembodied eyes and ears that floats outside of regular time and space. Then, whenever I leave the house for my weekly appointment with Nils, I think of myself as briefly turning human, becoming visible for just a couple of hours, before disappearing again for another seven days.

I wear the fancy dress to see Nils, and, in the half-dark of his clinic, I hear him gasp.

“You scrub up very nicely, JJ – if you don't mind me saying. Surely you haven't dressed up just to see me?”

I tell him about my parents' dinner invitation.

“I don't think I should go,” I say. “There's too much that could be spoiled.”

I don't mention to Nils that, lately, I've been able to hear my mother and father arguing through the walls.

“Hmm,” he says. “It's difficult.”

As much as possible, Nils tries to avoid giving me advice – at least, that's what he tells me. Once, he tried to explain to me the difference between a psychiatrist and a research psychologist, and how frustrating he found it when patients mistook him for a therapist. When he sat in a room with a patient with problems, though, he had to make sure he didn't try to help them – that wasn't his role. His job was to watch and understand and document the behaviour of others, while making sure his presence as an observer didn't affect whatever it was he was observing. In this way, I thought, he too was trying to be a ghost.

Now, in the present, he pauses before running through his standard set of questions.

“I can't tell you what to do,” he says, “but perhaps I can offer one thought, which you can leave or take?”

I run my fingers across the lapel of my new suit. It feels so different to the t-shirt I have lived in for years, and I wonder whether my mother will let me keep

it if I don't show up for their dinner.

“Okay,” I say.

“My only thought is, perhaps you should try to think about your mother's invitation from another perspective. Perhaps you could think about what it might mean to her.”

Nils is telling me, a person without a self, that I should try to stop being selfish.

Family dinner

My mother has cooked roast chicken for our family dinner. I can smell it from the corridor, where I stand in my new clothes, debating with myself whether or not to head down to the dining room. The scent of chicken is different to how I remember it, full and rich, not at all like the version I've created in my head.

I've been standing in place outside my memory fortress for so long that I can tell the food must be growing cold, and I wonder how long my parents will wait before giving up and scraping my meal into one of the plastic containers they use for leftovers.

The entire idea of the meal is stupid, really. It's not like my parents don't see me often enough. My mother sees me every Sunday on the drive to Nils' and whenever she arrives at my fortress door to leave me supplies, and my father sees me whenever I walk through the house on the way to the shower, ever since the tap on my own shower got busted.

Still, I think of what Nils told me at our appointment, the advice that wasn't really advice, and I begin to walk down the stairs, which creak under my weight. There's whispering from the dining room, and when I enter, my father, half-balding and paunchy and middle-aged, rises from his chair to greet me.

Whenever I see my father in the house, I turn my face away from him as quickly as possible to avoid spoilers, but this time, I stare at him as I walk toward the table. The difference between him and his seventeen-year-old self is so great, I'm almost convinced he must be an imposter. When I was a child, before my accident, it was much easier to reconcile my two fathers, because I never even thought of them as the same person at all – one, after all, was an adult, and the other hadn't even reached puberty. Now that my not-yet-father is almost fully grown, though, I struggle to guess at the nature of the metamorphosis that will turn him – lithe and strong and lean – into the half-deflated man I see in front of me.

"It's so good to see you, JJ." My father speaks slowly, as though he isn't sure I'll be able to properly understand him, while I nod and try to smile. "We'd like to see more of you, you know."

I don't say anything for a while. I can't. My tongue is tied. Except for my

time with Nils, I rarely have cause to speak in anything but the shortest bursts. Even then, Nils works around me, rarely prodding for a response when I can't find one to give. Once, perhaps to make me feel better about my inability to talk, he told me the story of a hermit who had spent his life on the outskirts of society – when he was finally captured by police, he spoke in sentences that trailed around in endless circles.

“But I... see you... all the time,” I try. My voice comes out squeaky and strained, undeveloped and untrained.

“Well, that's true.” My father laughs, but his face is ringed with frown lines. “But we don't see *you* much anymore.”

We're both wearing our Memoriaes, and I look into the camera above his head – him recording me, me recording him. In twenty-eight years, I'll see things from where he's sitting. I'll be inside his head, watching myself watching him. I begin to wonder what I'll think of myself, and how the perspective will shift as I'm turned into a minor character on the very outer periphery of my father's story.

“System,” I try to explain. “I have a... system.”

It's difficult constructing sentences. I think about the process of speaking, and how impossible it is – generating, out of thin air, strings of invisible words that float into the ether, meaning something only when they happen to tickle the tiny hairs on a nearby listener's ear. When unrecorded, spoken words were ephemeral, but in the presence of the Memoriae, everything is permanent.

“We can work around you,” says my father. “This is something we'd like, for us.”

“Why... now?” I ask.

I think about all of the discussions my parents must have had about me, and about the experiment, since my grandfather passed. Perhaps it had taken them this long for them to work up the nerve to ask me to leave my fortress – or, perhaps somebody from a child support agency had contacted them, asking them to explain why they'd heard reports of a child being locked in a dark room. Of course, I wasn't really a child any longer.

“It's complicated,” says my father.

“No, it's not.” My mother glares at my father, then turns to me and smiles. “We miss you,” she whispers.

“Oh,” I say, recoiling a little at the thought of my absence causing pain. I

didn't want to hurt anybody – after all, that was one of the reasons for my retreat. Once, in the past, while rewiring one of my not-yet-father's Memoriaes, my grandfather had told me that in a read-only life there could be no suffering, because all the things that hurt, or could hurt others, would have a barrier of space and time between them.

“My system... is for you, too,” I say. I try to slow myself down, but the thoughts are too complex; I can't voice them. As soon as a phoneme leaves my voicebox, I can't help but trace the sound of it moving, and by that time, it is too late – I've lost my place, and want to yank each phoneme back, one by one, so I can replace one with another.

My mother slides one hand across the table, and as it clasps around mine, I freeze. I can feel the warmth of her blood moving under her skin, and the soft cushions of her fingers, and I realise that this feeling, of being touched by another, was one I had entirely forgotten about.

In my memory fortress, whenever I felt most ghost-like, I would touch my body, trying to recall my shape. I didn't have a mirror – in the en suite bathroom, there was a blank space where one would normally be, and I would sometimes stare at that empty expanse on the wall and imagine that I *was* looking at myself – invisible, just a plain dark void. At other times, I would touch my ears and my nose and my eyelids to build up an idea of how it all sat, tracing my lineage, untangling what came from where. Whenever I did touch myself, though, there were no surprises: I could always anticipate, exactly, what it would feel like, because I was in control. Another person's touch is different – there is no way to preempt what might happen next.

“I'm sorry,” my mother says, and I wonder why but then I realise that I'm crying. I want to tell her she doesn't have anything to apologise for, but it's too difficult, so I just nod and do my best to breathe.

As my mother keeps her arm outstretched, my father sits and chews on the side of his cheek. I watch as he tries to figure out what to say. I wonder how many hours of discussion and planning went into this dinner, both of them deciding what was out of bounds and what wasn't, and how to make conversation with somebody who didn't exist in the world.

“Do you like the music?” he asks finally.

I smile at him, because it's one I know: an old song from a country music

singer that my not-yet-father would listen to almost every night, but only when he knew he was alone and nobody could make fun of him for it.

“It sounds like honey, doesn’t it?” he asks, and he points to an old record player in the corner of the room. “Listen closely.”

I look at the record player and watch the stylus rising and falling over visible peaks and crests in the sound, surfing the waves and feeling the vibrations. Then I think of the sounds I hear from the past, all of them cold and digital, everything from my not-yet-father’s voice to a rock concert coming to me through layer upon layer of patented compression algorithms, the data bouncing instantly and invisibly from satellites to towers to routers, multiplied and stored and deleted an improbable number of times before actually reaching my earbuds.

I wonder why, in this future that is really the present, my parents still listen to vinyl. Perhaps it’s a way of keeping themselves tethered to a more certain time.

When the records finishes, it starts skipping over the same little plinky-plonky guitar riff. The needle can’t seem to find its way back to the beginning.

“JJ,” my mother says, looking up from the table, still stroking my fingers. “Do you know what day it is today?”

“It’s... Tuesday,” I try, and my father lets out a sad laugh.

“It’s also your birthday.”

“Oh,” I say. “Of... course it is.” In the past, though, I hadn’t even gotten around to being born yet.

Time lapse

Once, through the Memoriae, I saw a video. It was a time-lapse recording of a girl – the mother had taken a picture once a day all way the from her daughter’s birth up to her twelfth birthday, and then jammed it all into two minutes, like a kind of flipbook.

I remember it, now, and how similar it was to the highlights reel of my not-yet-father’s life – both of them changing the scale of things, compressing a life into the length of a pop song. I think about how often I want to be able to scrub backwards and forwards, over and over again, until I can pinpoint exactly how my father has changed over his seventeen years. In many decades’ time, I could do the same thing, until, by the end, I could morph his face swiftly and smoothly from that of a newborn to a geriatric.

When I saw my father at dinner, I tried to fit his seventeen year-old face inside the face of the forty-five-year-old before me. It felt like an impossible puzzle: why did his mouth now default to a frown, why was his skin so leeches of colour? Were there stretches of years when nothing changed at all, and months where his features all decided to rearrange themselves in unison?

I knew that there would never be any way for me to really trace the changes. Access to the recordings came at Autobio’s prerogative. Unless they unlocked additional features, like the highlights reel, all I could do was watch it play out from start to finish – always at a remove of twenty-eight years, no matter how close I tried to draw the past towards me.

Zombies

Ever since the dinner, my mother has been hovering around the door to my memory fortress. I can hear her breathing in the hallway, then turning and walking back the way she came from. Sometimes, she'll knock on the door and I'll hear a creak as it opens, and she'll stand there in silence until I turn around.

"Hi, Mum," I'll say quietly, looking at the dark of her silhouette against the light spilling in.

"Sorry if I'm interrupting. I just wanted to take a look at my sweet baby! Anyway, I'll go," she'll say, nodding resolutely. "Sorry. I'm being *weird*. Weird old Mum, right?"

I know there's a good chance my mother has worked out the dates, and she knows the day is coming when I'll meet her in my father's past. Perhaps she thinks that will be it for us. I'll lose her as a mother, she'll lose me as a son.

*

Of course, one night, it happens. I watch as my not-yet-father drives his crappy red Mazda across the city, twenty-eight years in the past. He's only on his provisional license, but that doesn't stop him from taking a swig of vodka from a hip flask at all of the traffic lights, as rain batters the car windscreen and the wipers struggle to brush it all off. Through the rear view mirror, I can see that my not-yet-father's left eye is obscured by his aluminium Memoriae, and though it's a much earlier, chunkier, more primitive model than mine, somehow he pulls it off. Somehow, on him, it looks like a statement.

As my father arrives at a house by the beach, the rain stops, and I can see condensation begin to swirl. Other kids are being dropped off by their parents, and my not-yet-father stands proudly by his vehicle and watches as they make their way inside.

"Jay!"

Nicholas, one of the kids from my not-yet-father's soccer team, punches my not-yet-father on the arm, and my father proffers the flask from his pocket. I watch as Nicholas takes a furtive look around, takes a sip, then lets out a,

“*Whoohh*, boy.”

“I stole it from my parents,” my not-yet-father says proudly. “It’s the good stuff.”

From behind Nicholas, Ann-Rita slips into view.

“Hey, baby,” says my not-yet-father, and Ann-Rita squeezes my father’s stomach like it’s one of her stuffed toys.

“Vodka?” Nicholas passes the flask over to her.

“Oh,” she says. She plays with her little metal crucifix. “Maybe just a little bit.”

They look toward the house, deliberating over whether it’s time to enter, or whether they should sneak around to a side street and drink each of their illicit bottles dry. As they do, I see the outline of a girl, through the doorway, in the refracted light of the past. Just before she enters the party, she turns, looking out onto the street to catch a final glimpse at the setting sun through the passing clouds. Her hair is the same bright purple as her sunflower-patterned dress, and I recognise the dress immediately. My father bought my mother another one just like it for one of their anniversaries, back when I was a kid.

“You were wearing this the first time I saw you,” he’d said, and my mother had recoiled with laughter and said, “Really? Well, I hope you bought it in a bigger size.”

As the girl with purple hair and a sunflower dress steps into the house, I can hear my mother, in the present, pacing up and down the corridor.

*

Inside the party, my not-yet-father stands in one corner of a living room, swaying beside Nicholas and Ann-Rita, while Nicholas talks about zombie movies.

“You know, the Hollywood idea of a ‘zombie’ is just, like, a bad misinterpretation of the African concept of the ‘zumbi,’” Nicholas says.

“What’s a ‘zumbi’?” asks my father.

“A vindictive corpse that torments those that mistreated it in life.”

“Oh, that’s *awesome*.”

“I’m going to the bathroom,” says Ann-Rita.

As soon as Ann-Rita leaves, the *Memoriae*’s footage swings to focus on the

girl in the sunflower dress, sitting on a sofa, texting on her phone. Even as my not-yet-father turns back to Nicholas, I can see her in the corner of the recording.

“Hey.” My not-yet-father leans in to Nicholas, gripping his shoulder as he whispers, “Who’s that?”

“How should I know?” says Nicholas. “You know, you really shouldn’t ask about other girls if you already have a girlfriend.”

“I guess,” says my not-yet-father.

They both take another swig of spiked punch.

I_Love_You.exe

In the past, my not-yet-father stumbles into my grandfather's workshop, and I see the old man working on his software.

“Are you ready to help?” my grandfather asks, and my not-yet-father shrugs, still nursing the hangover from the house party the night before.

Only a few hours earlier, my not-yet-father had woken up beside Ann-Rita, in her bedroom, to the knock of Ann-Rita's mother as she brought in a plate of blueberry muffins. Ann-Rita's mother had stared at her daughter and my father in bed together, while my not-yet-father had snored quietly, pretending he was still fast asleep. The Memoriae, though, had captured Ann-Rita's mother shaking her head and anxiously twiddling her fingers, before leaving the room with the door wide open.

“What happened last night?” my not-yet-father had asked, a few minutes after Ann-Rita's mother had left the bedroom and he and Ann-Rita were both awake. Ann-Rita raised her shoulders. Simultaneously, they'd both looked over to the muffins, so fresh and warm they were visibly steaming.

“I...,” Ann-Rita had begun, almost in a whisper.

“You what?”

“Oh,” said Ann-Rita. “Nothing.”

My not-yet-father reached over the side of the bed for his t-shirt, then slipped it on, making sure not to get it caught on the metal prongs of the Memoriae.

“Hey, do you know what happened to Nicholas?” he asked.

“I... think he went off with a girl.” Ann-Rita leaned over to her side-table, picked out a blueberry from one of the muffins, and nibbled on it.

I realised, then, just how much of a life can be missed in the process of living it. It seemed difficult to believe both Ann-Rita and my not-yet-father could have forgotten losing their virginity. I'd watched all of it happen, even though I knew I should have looked away. My not-yet-father had been drunk and sloppy, and Ann-Rita had pretended to be, too, mimicking my not-yet-father's vodka slur. After it had happened, my not-yet-father had rolled to his side and promptly fallen asleep, but I could tell that Ann-Rita had stayed awake long afterwards.

As they both focused their attention on their respective blueberry muffins, though – taking them apart slowly, crumb by crumb – I could see that the double misremembering was a kind of challenge, or a pact. I watched out of one corner of the recording as Ann-Rita gave my not-yet-father quick glances between tiny bites, waiting for him to start filling in the blanks. It was one thing to know what happened, but another to repeat it out loud – and the latter, I could tell, was what made it most real.

On the tram ride home, I'd watched as my not-yet-father had pulled his phone out of his pocket, typing in Nicholas' name, then typing out the first words of a message before deleting it, switching his phone off, and starting over:

– So after you left...

– Guess what...

– So I think I...

– Was the girl you met...

“Yeah, I'm ready,” says my not-yet-father to my grandfather, still swaying slightly.

My grandfather sits my not-yet-father down at a desk, in a polyester-cushioned swivel chair, and teaches him how to sift through all of his business receipts and invoices – each of them addressed to ‘Innovative Technologies International Incorporated’.

“How much am I getting paid, again?”

“However much you need to pay off that car,” my grandfather says.

I wonder if my not-yet-father has put the pieces together yet, recognising that my grandfather is engaging in high level international racketeering. I worked it out years ago, one maintenance day in the past, when my grandfather showed me Deliverwhiz, the machine learning system he had developed to craft confidence fraud emails. The technology would compose poetic but half-nonsensical messages designed to weave their way around spam filters and lock onto the easily swindled.

It was paired with ‘I_Love_You.exe’, a Trojan Horse that would run in secret on victims' computers, tracking their every keystroke. My grandfather's Trojan would haul in text from victims' computers, scrape out every half-finished novel manuscript, gooey romantic email and overly-earnest digital diary entry and throw it into an algorithmic mixer to produce imaginary people he could sell

on to Eastern European crime lords.

Almost every maintenance day since, he would reveal to me, the Watcher, the latest improvements he'd made to the software. In a recent version, you could click a button to generate an impassioned missive from 'Jennifer from Humpybong, Queensland', who was suffering from metal poisoning and desperately needed \$45,000 for a life-saving operation, or 'Dwayne from San Francisco', who was a recruiter that could line the recipient up with a prestigious job with Google, but just needed proof of identity, in the form of bank records, tax returns, social security details, and a full set of fingerprints. If a potential victim took the bait, the software would respond in Jennifer's voice, or Dwayne's, or any one of hundreds of others, every one of them a cubist composite of dozens of lives, moulded from the scrapings of digital detritus.

Dwayne and Jennifer were actually real people, or, at the very least, were cut from the cloth of real people, metamorphosed into semi-convincing simulacra. None of the suckers drawn in by the Dwaynes and Jennifers ever knew they were really just interacting with sophisticated strings of *if/then* statements designed to part them from their money, and the *real* Dwaynes and Jennifers never knew they'd been turned into *if/then* statements in the first place.

"It's victimless technology," my grandfather had said, speaking into the lens of the Memoriae, conveniently forgetting that there *were* victims involved, further down the line – all of those who passed on their credit card details to my grandfather's imaginary people, and then onto non-imaginary criminals. But my grandfather was able to wash his hands of that. After all, he was simply providing a service to clients, and it was up to them to decide how they might like to use it.

The scam email technology was what gave my grandfather the freedom to experiment with other projects. It made enough money for him to coast on, with only minor tinkering required to bypass Yahoo or Google's spam-fighting tweaks, allowing my grandfather to spend most days dabbling with the recording gadgets and writing techno-utopian philosophical treatises.

Still, I never understood quite why the Memoriae came into being in the first place. Perhaps everyone has some kind of biographical urge that needs satiating.

*

In my grandfather's workshop, my not-yet-father sits before the computer, typing numbers into an Excel spreadsheet. I scrutinise the fields and quickly realise that the work he's doing carries the possibility of almost a lifetime in prison, as he muddles the flow of currency into my grandfather's bank accounts to obscure the fact that much of it has arrived courtesy of Russian organised crime syndicates.

My not-yet-father doesn't know what he's doing, though. It doesn't seem like he has a clue – he just looks at a number on a piece of paper and then types the corresponding key on the numerical pad on his computer keyboard.

As he vaguely clicks around the spreadsheet, dragging a stack of numbers from one column to another, then back again, his phone starts ringing, playing the same old country music tune he was playing on my birthday, twenty-eight years later. In the past, when his phone rings when he is out with his friends, they all laugh at the ringtone as though it's a big joke. My not-yet-father has learnt to use irony as a shield for earnestness.

My not-yet-father ignores the call, keeping his face pressed up close to the intricately disreputable spreadsheet. The phone stops ringing, then rings again. My not-yet-father doesn't really mind: he enjoys listening to the singer's heartfelt ballads, whether in the form of a cheap ringtone or on a record glazed with honey. Eventually, though, he takes the call.

“Hi, Ann-Rita.”

“Hi,” she says, the phone's speaker making her voice thin and tinny. “So, I was thinking... we should come up with nicknames for one another. What would you call me if you had to come up with something?”

My father drags some numbers with his mouse, each click carrying the possibility of fifteen years in prison.

“I don't know. I think ‘Ann-Rita’ is okay.”

“How about, maybe, something like ‘Anny Bear’ or ‘Ri-Ri’?”

“What's wrong, Ann-Rita?”

“Oh, nothing's wrong. I just wanted to talk.”

“I'm kind of busy right now,” says my not-yet-father.

I can see my grandfather sitting at his desk, handling a new model of the Memoriae. It looks pretty amateur, with rough edges and wires sprouting everywhere. Slowly, over days and weeks, he will refine it, until eventually it is

good enough to place on my father's skull.

"Oh," says Ann-Rita. "That's okay. I'm playing netball this evening, by the way. Our team's called the 'Spirit Sisters'. You could come along, if you'd like."

My not-yet-father holds 'Undo' and watches the numbers as they move frenetically around the spreadsheet, and then begin disappearing entirely. If he keeps going, he'll neatly undo all of his illegal activity – but he doesn't. Instead, he absent-mindedly presses 'Redo' and watches as all of the illicit transactions return, number by number, field by field.

"I'll see," he says. "I'm kind of tired."

"Oh," says Ann-Rita. "That's fine. I understand."

Ontological calculus

In the present, my mother knocks on the door to my memory fortress and asks me if I'd like to have lunch with her.

"I'm making tuna sandwiches," she says.

"I'm... okay with my food substitute," I say. I still haven't told her about my grandfather's idea of replacing my diet – such as it is – with catheters and tubes. Then, as I look up at my mother, I notice that she's wearing the same sunflower dress my father gave her, covered by a dull gray apron.

"Okay," I say, slowly, "but... no spoilers."

"Of course. No spoilers. I promise."

In the kitchen, my mother sits, elbows on the table, and stares at me, holding her face in her hands. I wonder if I should tell her about what happened a week earlier, when I saw her at a party, twelve years before I even existed.

As I pick up one perfectly triangular half of the sandwich my mother has made, I watch through the Memoriae as my not-yet-father stands by the platform at Sandringham Station. A man with a rainbow beard sits on the ground in front of him holding a pair of football boots by the laces. When my not-yet-father's train arrives, he shuffles onto a crowded carriage with seats the colour of neon vomit and watches the city through a scratched-up window covered in greasy palm prints.

"JJ," says my mother, eventually. "Can I ask you something?"

I look up, and a chunk of tuna and mayonnaise falls out of the sandwich.

"Hmm," I say, between chews. "Okay."

She doesn't say anything for a while.

"What... do you think of your dad?"

In the past, my father has been catching trains all morning, going nowhere: up the South Morang line, down to Frankston, across to Lilydale. He gets out at the end of each line, then switches tracks. I wonder what he's doing, but I have no way of finding out. I can't see inside his head, and every time he proceeds on a course of action I can't understand, I am more conscious than ever of the gap between him and me.

Now on a train bound for Flinders Street Station, my not-yet-father moves

to the back of the carriage, ignoring a kid in a black Yankees cap who mimes pulling the recording headgear from my not-yet-father's head and snapping it in two. These kinds of interactions are not uncommon, but they happen to my not-yet-father less frequently with every passing year, as the Memoriae's hardware shrinks and technology companies begin rolling out smart-watches and head-mounted extreme sports cameras, slowly priming the world for silicon touching skin.

Twenty-eight years in the past, my not-yet-father loads up an old Fleetwood Mac track on his iPod, and the plinky-plonk of it fills my head as I try to think about how to respond to my mother. I need to remember to mark down another win in the betting notebook, though the odds of him choosing this song are so high my payout is next to nothing.

She broke down and let me in; Made me see where I've been.

I remember hearing this song as a child, my father playing it on an acoustic guitar every night to put me to sleep – over and over, dozens of times, hundreds. He would coo the words, as though it were a lullaby, sweet and meaningless. “Been down one time; Been down two times; I’m never going back again.” In one section, just before the second chorus, the guitar picking in the original recording seems to drift out of sync, almost imperceptibly, and it draws me around in time – once, twice, a thousand times.

What is my not-yet-father thinking of as this song plays? I can only guess, only try my best to recreate an approximation of his internal monologue. I can't help but overanalyse. My own mind is greedy, hungry to seek out patterns in coincidences and extract deep meaning from inconsequentialities. I'm not sure if there are undercurrents to my father's life, chasmic worlds of deep-down memory that flow beneath everything. I know that most minds are simply crammed full of practical things – *is this my stop?; do I need an umbrella?; did I forget to feed the dog?* – all adding up to nothing in particular. Could there really be space for anything else?

I turn to my mother, still looking at me over the kitchen table.

“I... like him,” I say, because I'm not sure there's any other option.

“Okay,” she says. “That's good. That's nice.” She doesn't sound convinced. “So, whatcha lookin' at?”

“Dad's playing soccer,” I lie, tapping my Memoriae.

Mum nods. She knows I'm making that up. When I was younger and she caught me in a fib, she used to lower her head and pinch her nose as though it was growing.

"Can I see?"

"It's hard... for me to take the Memoriae off," I say, as I always have. But this time I lift up my arms and fiddle with the latches. It comes loose easily, the way I knew it would.

*

I'm not sure why I do it, but I let my mother peek with me into the past. She scooches her chair beside me and she and I sit there, at the kitchen table, tilting the retinal projector between us so that the light spills into one of our eyes, then the other. She holds one of the buds to her ear, just close enough to hear.

"I remember this day," she says, then stops herself. "Sorry, that's a bit of a spoiler, I guess."

"That's alright," I say.

"Just... watch over there. By the door."

The train stops at Prahran Station, and passengers filter in, some sweating in suits and ties, others sauntering in shorts and sandals.

"Holy crap," she whispers. "There we go. That's *me*." She taps me on the arm and I can feel one of her long nails digging into my skin.

"I see you," I say. "You're... up the back in the overalls."

My mother laughs.

"Yep. Oh my God. Now he's going to come up to me and say something stupid."

In the past, my not-yet-father keeps sneaking glances at my not-yet-mother, then back at his phone, but my not-yet-mother just looks out the window as the train makes its way *clickety-clack, clickety-clack, clickety-clack* – toward the city. My not-yet-mother brushes a wisp of dark brown hair off her forehead, then sucks in her cheeks, as though holding her breath underwater like a neon guppy.

"I was having the worst day," she tells me. "My parents wanted me to get a scholarship and I was coming back from the test and I thought I'd flunked it – which I kind of did. And I *definitely* didn't want a grubby teenage boy trying to

sweet-talk me.”

Just as my not-yet-mother exhales, my not-yet-father ambles over, swaying as the train turns a corner.

“Remember me?” he says.

“Hi,” says my not-yet-mother, her voice lilting uncertainly. “I’m not sure.” She cranes her head to look further down the carriage.

“You were at that party,” starts my not-yet-father. “The one by the beach, last weekend.”

“Oh?” says my not-yet-mother. She turns back to a book in her lap: *The Bell Jar*.

“That’s meant to be depressing,” says my not-yet-father.

“Yeah, sort of.” My not-yet-mother fans the pages. “I haven’t got to the really bad bits yet.”

“Right.” My not-yet-father fusses with his shirt sleeves. “It mustn’t be very fun to know there are bad parts coming.”

My not-yet-mother shrugs. “Not especially.”

In the present, Mum can’t stop laughing. “Holy crap,” she repeats, tinkering with the Memoriae’s projector, trying to hold it steady in front of her pupil.

“You’d think he’d get the message.”

Still, my not-yet-father persists. “Anyway,” he says, “don’t you think it’s strange?”

As the train begins to slow down, my not-yet-father grips one of the poles, and my not-yet-mother looks out the window for the name of the station. South Yarra. Two stops before the city.

“I’m not really sure,” she says. “What’s supposed to be strange?”

“You don’t think it’s strange I’ve never seen you before and now I see you twice in a week?”

My not-yet-mother gives a kind of Cheshire Cat smile. “Well, I’m sure you’ve seen me before,” she says. “You’ve just never noticed. It’s just that as soon as you *do* notice somebody, you’re predisposed to notice them again.”

I think about all the times I’d seen my not-yet-mother in the past, before my father did – at least half a dozen times, on the same train route, once two days in a row.

Mum chuckles. “I was just trying to fuck with him, then,” she says.

“I’ve seen you before, though,” I say.

I look at my mother twenty-eight years ago, and then I turn to look at my mother now, and my thoughts hover somewhere in the space between calculus and wistful longing. I suppose what I must be thinking about is *ontological* calculus: the metaphysical study of the differential equations of nostalgia. On the train, I can see that my not-yet-mother is still not remotely convinced about this boy. As she glances out the window, I know that she must still be making her mind up about whether to get off at Richmond, then wait at the platform for the next loop train to take her to the city, without him on it.

Beside me, I can feel my mother’s body moving, and I can tell that she’s sobbing.

Dumb life

Almost every day during the summer, twenty-eight years in the past, my not-yet-father trudges down to my grandfather's workshop to input numbers in a spreadsheet. I can see that my grandfather was happy for company, even if my father wasn't there by choice. As if to underscore the point, my not-yet-father had taken to marking off the days with tally marks on a piece of paper tacked on the wall behind the desk – ironic, I thought, considering the absent-minded DIY accounting work he was doing for my grandfather had a real chance of sending him to prison.

“Dad!” my not-yet-father shouts, as he nears my grandfather's basement workshop. “I'm here, with my dumb life – ready for service.”

Around my grandfather, my not-yet-father had recently taken to referring to everything as ‘dumb’: dumb grass, dumb milk, dumb carpet, dumb desk, dumb roof.

It was a joke at my grandfather's expense, a nod to the older man's tendency to disparage anything that hadn't yet opened itself up to complete electronic understanding. Everything would become smart, eventually, according to my grandfather – just look at all of those phones and watches and fridges and cars, all of those houses and lightbulbs, all of those once-analogue things gaining sensors and processors and tiny concealed antennas, all once silent but now dribbling continuous streams of machine-readable information about themselves out to the web!

Even my not-yet-father's most ridiculous imagined ‘smart’ gadgets had a tendency of manifesting in their home: one day, my not-yet-father would walk into the kitchen to brew a coffee, only to find all of the mugs had been replaced with inductively-charging cups that continuously monitored liquid intake and sent the findings to a comprehensive health monitoring app on my grandfather's phone. Then, one weekend, he would find that the coffee table in the living room had been hacked to contain within it a concealed digital scale to record the weight of everything that was placed upon it. Slowly but surely, everything that happened around my grandfather was becoming quantifiable, patterns emerging out of the interplay between so many different numbers rising and falling,

‘intelligence’ reconceptualised as the ability of inanimate objects to talk to one another entirely in digits.

My grandmother seemed to accept these intrusions. Once, through the device, I overheard her talking to a friend on the phone.

“Oh, it’s just his *quirk*,” she said. “Everyone has *something*. I’ve got my garden and he’s got his numbers.”

*

As my not-yet-father works on the spreadsheets, my grandfather stands near him, musing about artificial intelligence, just loudly enough for my father to hear. He wants my father to wear the Memoriae by choice, not by necessity – not as a corrective to his sightlessness, but as an enthusiastic digital pioneer.

“There is so much that might be done when a life is captured in its entirety, so much that can happen when you transcribe all consciousness and place it within an organised network in a standardised format,” my grandfather mutters, as he types out another technological utopian manifesto. “Mashing minds and histories together, making them perfectly accessible, integrating them, turning them into one.”

Seen this way, I can understand my grandfather’s perspective: *was* there any doubt that human lives were dumb, relative to the sophisticated new washing machines able to accurately monitor themselves and place orders for new deliveries of powder and bleach, or toasters able to electronically notify their owners when the bread inside was a perfect golden brown? Comparatively, lives were still far too analogue, too disconnected, still unable to properly reduce themselves to a form right for dissection and comprehension by all of the other intelligent machines.

“There’s still so much unstructured data resisting mechanical comprehension,” my grandfather mumbles. At that, I remembered a camping trip my not-yet-father had taken with his parents years earlier, to the Grampians National Park. My grandfather had walked around the campsite, staring at the rocks and the shrubbery and the clifftops and the valleys below, everything arranged in a kind of magnificent jumble.

“It’s too much,” he said to my grandmother, who was cooking soup over

the gas camp stove. “I can’t figure it out.” It sounded like he was in real pain. I could see that the non-digital world terrified my grandfather. It was too large, too wild, too unknowable. It needed to be tamed.

“You don’t need to figure it out, Archibald,” my grandmother said, tinkering with the gas canister. “Those are rocks and those are mountains – this isn’t some kind of puzzle.”

My grandfather had sat thoughtfully on his foldable chair for a while.

“It’s alright,” he had said eventually. “One day, I *will* work it out.”

He’d pulled a laptop from the bag beside him and rested it on one knee, then plugged it to a power cord strung from the boot of their car. Through the Memoriae, I could see him open up a text editor and begin typing lines of code. Whenever they had gone away as a family, my grandfather’s devices had functioned as his silicon security blanket, ensuring he was never too far from Big Data, never forced to grapple with the world in a raw, qualitative form he could not reduce.

“Can we play with the Frisbee?” my not-yet-father had asked, but my grandfather was already absorbed in lines of colour-coded monospaced type cascading down the screen.

Bored, my not-yet-father had shifted his gaze upward, to a bird flying above them, circling around the clearing before moving on. My grandfather paid it no attention. After all, how was he to say what kind of bird it was or what exactly it was doing? There would have been information about migratory patterns online, whole reams of captured statistics in CSV files that could have revealed how changes in the climate altered the path of the creature, ways to track how the length of its wingspan corresponded to broad evolutionary shifts. Without this information, though, there was really not much to see – just another beast in the sky. The world was vastly more accessible in the form of spreadsheets – otherwise, really, it was just colours and shapes and sounds and smells, all of them vapid, temporary, amounting to nothing.

Though my not-yet-father was still staring at the now-empty sky, I could see, out of the corner of the Memoriae, the many lines of code that were compiling on my grandfather’s laptop. My not-yet-father had glanced at the screen, briefly, but it hadn’t meant much to him, just bunches of *if/then* statements seeking patterns in the way that computers did: rigorously and rapidly,

hungrily but systematically, mindlessly, always ready to give up when delivered anything that didn't match a series of conditions that had been already pre-defined. That was the strangest thing about 'smart' gadgetry: how could anything have intelligence if it could never actually think?

“What could you tell me about me?” my not-yet-father had asked my grandfather, suddenly, as they sat around a stack of twigs and crumpled newspaper, over which they would later roast their marshmallows. “What could the computer say?”

My grandfather just sat there for a while, staring at my not-yet-father. There was nowhere for my grandfather to look but directly at the camera on my not-yet-father's head, because it was true: my father had no vision beyond what the Memoriae offered him, passing its observations to him in a series of well-timed and well-placed electrical impulses to the brain. My grandfather never needed to justify himself, or to work to convince my not-yet-father to participate in his grand experiment. What my grandfather offered, and what he could take away, was always implicit. Even so, I could see that, in his own way, he was overjoyed at my not-yet-father's interest.

“The patterns are still emerging,” he had said, eventually. “I wouldn't be able to tell you, even if I knew. It would only contaminate things.”

The bird had come back by then, stealing my father's attention as it looped in strange figure-eights that seemed to grow tighter and tighter every time.

Now, twenty-eight years ago, sitting at his desk in my grandfather's workshop, my not-yet-father returned to the question he'd asked years earlier.

“What are you looking for in me?” he said, turning to my grandfather.

My grandfather smiled.

“Nothing in particular,” he replied. “Just... patterns.”

Beneath the paving stones, the beach

Lately, in the present, my parents have been fighting again. Their arguments are so loud that the sound of crying and screaming creeps through my soundproof walls and into my memory fortress. I try to push my earbuds in tighter, but instead of bringing the past to the forefront, all I can hear is the rush of blood around my head. I shove pillows under the gap in my door to try to catch the sound, but it doesn't work. At least I manage to muffle what they're saying: the pillows filter out the words, even as they leave the sentiment.

It's jarring, being forced to listen to my parents shout and yell in their bedroom as, twenty-eight years ago, they are only just beginning their courtship. Somehow, on the train the day they met, my not-yet-father had managed to get my not-yet-mother to divulge her email – he'd asked for her phone number, which she refused, but she offered an old email address instead: *flowerchild_felicity@hotmail.com*. As soon as my not-yet-father had returned home, he started drafting an email, but it had taken him two whole days to get it right.

This evening in the past, they've arranged to go to the mall. The mall! I avoid spoilers about the present, but I know for a fact that shopping malls don't exist now. I've seen all of the boxes in the living room, all of the items my parents have purchased from Amazon, and I knew that this must just be how things worked now, everything in the world ordered right off a screen, only to appear at your doorstep half an hour later. Once, I looked out the window on the way to the shower and saw a delivery drone buzzing in the back garden, figuring out where to land a box of groceries.

I do sometimes wonder what exactly people *do* in the present. Do they ever really need to leave their houses? If malls don't exist, do cinemas, arcades, theatres, galleries, bars? Even in the past, I could see the way things were heading – everything moving inwards, the world shrinking to the few square metres of space immediately surrounding a futon, and into the few square inches of screen held in one hand or secured to a wrist. Perhaps most others live as I do now – if that were the case, it would follow that none of us would ever even know it. Perhaps there were whole housing complexes full of boys and girls, men and

women, all hooked up to Memoriaes, settled in their living rooms for the long haul.

Still, as I watch my not-yet-parents promenade along one of the floors of the megamall, stopping to point at objects in all the store windows, something clicks. I could see how looking at lots of stuff you didn't yet own could be, in its own way, a little romantic – imagining so many alternate lives, with so many alternate things.

In one of the boutiques, my not-yet-parents try on hats and sunglasses, and at the bookstore, they scan the shelves, giggling at minor misalignments in consumer preference. Looking out over the mess of escalators, my mother begins whispering to my not-yet-father about ad busting and culture jamming, and how she would sometimes write out secret messages on pieces of paper then stuff them into the pockets of the pants and jackets sold at the mall's department stores. Even though I can't see my not-yet-father's face, I can tell that he is giving my not-yet-mother a double take. He's in the stage of love where everything is surprising.

“Are you serious? Can I see one?”

“Maybe. They might have found them and thrown them away.”

My not-yet-parents head into one of the department stores and up to the menswear section, then stick their fingers into the pockets of a pair of \$500 Prada trousers.

“Oh, shit!” says my not-yet-mother. She slips the note out and they both run back to the entrance.

“What does it say?”

My not-yet-mother cringes.

“Okay, well, maybe it seems silly now that I think about it.”

She hands him the note and my not-yet-father and I both read it.

“‘Capitalism is a piñata’?”

“I dunno...,” says my not-yet-mother, now a little sheepish. “There's a book I read a few months ago. It's by a French writer from the 1960s – it's called *Society of the Spectacle* and it's about this idea that everything we do is a kind of consumption. Everything is kind of on, like, these invisible tracks, and we're not really making our own decisions... except that, because we're on the tracks, it's hard for us to even see that. At least” – my not-yet-mother pauses – “that was my

interpretation.”

“Well, the mall was probably a stupid place for us to go, then,” says my not-yet-father, a little sulky.

“Oh, no. We can have fun anywhere.” My not-yet-mother smiles, and it’s a knowing smile, a full smile – the kind of smile I’d never seen from her before.

“There was this saying from the protests back then: ‘Under the paving stones, the beach!’ It’s this idea that there’s a better world just beyond our reach, that we can make possible if only we see how things really are.”

“You’re really smart,” says my not-yet-father, and I know that secretly he’s wondering why my mother has agreed to spend time with him. I’m secretly wondering that, too.

They both kick at the floor of the mall together, as though hoping that this other world will open up beneath them.

*

My not-yet-parents end up at a diner. They buy meal deals, and when they’re sitting in a red vinyl booth, my not-yet-father takes out his flask and pours a splash of vodka into his Coke. He holds the bottle up to my not-yet-mother, but she shakes her head.

“No, thanks.”

“It’s my way of going off the tracks,” he says.

“I prefer LSD,” says my not-yet-mother, and my not-yet-father’s eyes widen.

“Seriously?”

My not-yet-mother laughs.

“Yeah, sometimes. You need to come up with a good place to do it, though. It’s not something you want to take at a house party. It’s a more... interior experience.”

“Maybe we could take it together sometime.” My not-yet-father takes a gulp of his spiked soda anyway.

“Maybe. I’ll need a little bit longer to figure out whether you’re somebody I want to go on a trip with, though.”

“What do you think about when you’re on acid?”

“Um...” My not-yet-mother dips a hot chip into a little plastic bucket of sauce, then swirls it around and around, as though she’s trying to create a viscous condiment whirlpool. “Well, here’s one thing I thought about last time. You know all of those self-help books that are about finding the ‘real you’?”

“Yeah.”

“Okay, so... if you need to find the ‘real’ you, then who is the one that is supposed to be finding it? The ‘fake’ you? How can the ‘fake’ you find the ‘real’ you? It doesn’t make sense! And if everybody thinks they are who they *tell* themselves they are, how are you supposed to ever realise you actually *aren’t* the person you’re telling yourself you are, anyway?”

My not-yet-mother tips a few chips into her burger.

“That’s kind of confusing, I know. I just mean... is there a real person deep beneath trying to get out, or are we just the story we tell ourselves *about* ourselves?”

My not-yet-mother gives my not-yet-father a kind of half-smile I’ve never really seen before.

“Hmm,” says my not-yet-father, though I can tell he’s not really following. “Who do *you* think y’are, then?” He’s already had too many sips of his spiked drink.

“Darling, I’m just a girl who knows for sure that she doesn’t have a clue who she is,” says my not-yet-mother. I can tell that she’s channeling her best Katherine Hepburn – my not-yet-father once fell asleep in front of the television, and I watched hours of old movies while he slept.

My not-yet-mother mightn’t know who she is, but that doesn’t have to stop me from wondering. People speak about souls, or about heaven or reincarnation, as though a person’s essence is unwavering, but proceed to spend their entire lives either trying to change, or trying to stop themselves from changing. Do we spend our lives moving away from our perfect selves, or moving toward them? Has my mother spent her life finding out who she is, or forgetting?

As they sit and eat their meals, my not-yet-father’s phone buzzes every few minutes, and I can see Ann-Rita’s name flash up on his screen. Eventually, my not-yet-father flips it over on the table so my not-yet-mother can’t see.

“You look like you need some air,” says my not-yet-mother, after they’ve both finished, and I wonder how much vodka my not-yet-father poured into his

cup.

My not-yet-parents amble out of the mall and through the carpark – my not-yet-father staggering while my not-yet-mother walks beside him, ready to catch him if he falls. When they reach a park on the other side of the road, I hear cicadas, and I can tell that the evening is warm and still. There’s music playing from somebody’s home stereo, and the hum of air-conditioning units fills in the difference.

My not-yet-father takes my not-yet-mother’s hand, and they start to dance. At least, my father thinks that’s what they’re doing. He’s really too drunk to stand, so my not-yet-mother holds his hands and uses them to control him like a rod puppet.

“Hey, Jay,” says my not-yet-mother. “Can I ask about the camera? What are you wearing it for?”

“It’s kinda complicated,” he slurs. “It’s a... medical thing.”

“Oh. Okay.”

“Yeah. It’s not a big deal, really. I hope I won’t need to wear it much longer.”

Ann-rita.doc

In the past, my not-yet-father has now been two-timing my mother for weeks.

When it suits him, he responds to Ann-Rita's messages, full of apologies, and visits her house to fool around in her bed until Ann-Rita's mother opens the door and tells them to come downstairs for cookies. Then, he visits my mother and they watch French New Wave movies that I can tell my not-yet-father doesn't understand.

I'm not sure why he hasn't broken it off with Ann-Rita, but I guess that his perspective isn't the same as mine. He doesn't realise that one of the girls he is cheating on will eventually turn into the love of his life, while the other will drift away forever.

While writing my father's biography, I sometimes mark out passages in red – the ending or beginning of chapters, or the peak or trough of plot arcs. It's only possible to see these things from a distance. In the middle of a life, though, I guess everything is just a mush.

*

Today, my not-yet-father arrives at Ann-Rita's after soccer training. He leaves a bag of muddy boots and shin guards by the front door, then sneaks up into Ann-Rita's room. They make out in front of her tiny CRT television, which thrums with bad TV, painting both of them with the flashing colours of cartoons and half-hour sitcoms.

As they ignore reruns of *Beverly Hills 90210*, Ann-Rita asks my not-yet-father if he'd like to go to a Sunday service with her, at a Pentecostal church out in the western suburbs. In the full-length mirror in Ann-Rita's room, I watch my not-yet-father frown.

"I'm in a Gather Group," she says. "It's like a club. This week, we're talking about analogies for the Holy Trinity, but we also play games and have fundraisers, and there's a band room and –"

"I didn't know you were religious."

"Well, yeah." She shrugs. "There are a lot of things you don't know about

me, I guess.”

I can see my not-yet-father’s posture shifting, as he sits on one corner of Ann-Rita’s bed. He looks at Ann-Rita, with her hair tucked into a neat bun, sitting with her back perfectly straight and her hands resting neatly on her lap, and I can see that he is trying to place her into a new kind of context.

“But you... drink?”

“Yeah,” she says, quietly. “Nobody in my Gather Group knows about that. Maybe I shouldn’t do any of that anymore.”

For weeks, I’ve watched my not-yet-father in his bedroom, rehearsing break-up scripts, but whenever he sees Ann-Rita, he runs completely off track and they always seem to end up in Ann-Rita’s bed. Now, after they touch each other under the covers, my not-yet-father falls asleep on Ann-Rita’s bed before Ann-Rita’s mother can even intrude with her offer of baked goods.

Ann-Rita holds my not-yet-father as he sleeps, as though worried he might drift away, and I wrap my arms around myself and pretend they’re Ann-Rita’s.

“I just want you to say it,” Ann-Rita whispers to my not-yet-father. Her face goes all blotchy and when she cries, she tries not to shake too much. “You don’t even have to mean it.”

“I love you,” I say quietly, in the darkness of my memory fortress. It comes out unexpectedly, an amalgam of affection and pity.

In the folder where I keep my biography of my father, I create a new file, titled ‘ann-rita.doc’. I try to work backwards, filling in her backstory out of the limited fragments my not-yet-father picks up.

She works at a café. It’s her first job. I know that much.

Perhaps there are boys in the café, sometimes. High school boys, in knee-high socks and starched white shirts, and Ann-Rita stutters when she serves them. *C...c...coffee for C... C... Christian. L... l... latte for... Lawrence.*

Perhaps Ann-Rita is hoping that one of these boys will ask her on a date, and she can smile and say, “Oh, no, I’ve already got a boyfriend.” But perhaps she works next to girl called Ellen, who talks a lot and seems to walk on springs, and when the boys are ordering from Ann-Rita, they all glance at Ellen instead, ruffling their ties and flicking the buttons on their blazers. Perhaps Ellen leans over the counter, touches her fingertips to the cake dome (‘Cheesecake of the Day: Arizona Sunset’) and whispers, “I finish at six” to one boy, a redhead with a

bandaid on one elbow, then, a minute later, “I finish at seven”, to a blond with a pack of Peter Stuyvesants busting out of the pocket of his grey flat fronts.

Perhaps Ann-Rita is waiting for another boy, anybody else – maybe somebody from her church, and not from school this time. Maybe she watches lots of old movies, and replays the parts where the actors offer proclamations of love, trying to figure out how it sounds so much like they mean it, even though they’re just reading off a script.

On my laptop, I begin to write a long letter I will never send, to Ann-Rita – an apology on behalf of my father, whose past is tangled with my present.

Wherever Ann-Rita is, in the present, I know that my not-yet-father is probably only a distant memory to her, if that – just a hazy reminder of the stupidity of first love and the teenage male brain. Maybe she’s a church leader, now, or a senior policy officer at the United Nations, and maybe the girl I am looking at right now, holding my not-yet-father close, is just an early, unrefined version of Ann-Rita that she will eventually leave behind. Still, this day, and this year, must return to her sometimes. Memories of first love must nestle themselves in a particular part of the brain that resists forgetting. My own mother is testament to that.

Ann-Rita dabs a tissue on her cheek, then she moves her face close to my not-yet-father’s Memoriae.

“I wish you didn’t have to wear this,” she says. “It makes me sad that you need to.”

I can see Ann-Rita’s hands, burned slightly from the café’s espresso machine, with cinnamon and cocoa powder stuck under her fingernails.

“I wish you bothered to figure out things about me.”

I examine Ann-Rita’s face, the Memoriae refocusing to capturing the pores on her cheeks, each one pronounced and perfectly spaced apart, like the dimples on a golfball.

Veldig bra

“Morning greetings!” Nils says, as I make my way into his darkened clinic for our weekly appointment. His voice is soft and makes me think of watercolours, each letter damply bleeding into the last. “*Hvordan går det?*”

He is trying to teach me Norwegian.

“Good,” I say. “Um, *jo takk, bare bra?*”

“*Veldig bra!*”

He smiles and rubs his neatly-kept blond beard.

I take a seat and squint over at the fish-tank in the corner of the room. There’s usually a big Siamese Fighting Fish bobbing around in the middle, but today it’s empty.

“Where... is Alrik Three?” I ask.

“Oh.” Nils frowns. “He followed Alriks One and Two.” He mimes flushing a toilet.

I look over at Nils’ bookshelf. Most of the novels are thick, hundreds of pages long, and it makes me wonder: who could possibly have that much to say? How many combinations of unique, coherent thoughts are there? Of course, I know that the answer to these types of questions is always: vastly, incomprehensibly more than you’d think. It’s like when you learn that if you fold a piece of paper in half just forty-five times, it will be tall enough to reach the moon.

Nils pulls his chair over toward me. He has his pen in his mouth and he chews it nervously.

“How are you feeling, JJ?”

“Hmm,” I say. “Three out of ten.”

“And why that number?”

“I’m not sure.”

“That’s okay.” He pulls his pen from his mouth and marks up the questionnaire. “How about... in your subjective opinion, what is the most significant thing’s happened recently in your father’s past?”

I run my mind backwards over the past week.

“My not-yet-parents went on another date,” I say.

“Ah, that’s nice.”

“I guess so.”

My not-yet-parents had walked along the St Kilda foreshore promenade, their two hands tangled together, arms swinging. I was worried that I might blink and next time I looked into the Memoriae, they’d be married and I’d be watching myself in a cot in the corner, *goo-goo-ga-ga-ing*.

“Is that scary? The thought of ‘meeting’ yourself at some point?”

“Maybe,” I say. “But then I’ll disappear.”

“How will you disappear?”

“Into my memory fortress.”

I keep going. I tell Nils about how, during their date, my not-yet-parents talked about the war, and how strange it was that the world seemed to be lurching backwards as the dark cloud grew. I remember my not-yet-mother saying that, the way she thought of it, the past was a part of the future and the future was a part of the past – and that even though we were now enlightened enough to end conflict, all the bad stuff from the past seemed intent on travelling along with us.

“The war?” Nils says, scribbling on his notepad.

“No spoilers.”

“Okay.” Nils takes off his glasses and rubs the lenses on the hem of his shirt. “Do you think there was a war, though?”

“Maybe,” I say.

“Does that worry you?”

He’s already asked me these kinds of questions before.

“It’s a bit scary, I guess.” Still, I knew that I wasn’t really concerned about the war. It was far away, and there were a lot of bad things that were much closer to my father that could happen between then and now.

Fuck them, then

In the past, my grandfather used to provide my not-yet-father with a handy script for anybody who dared ask about the Memoriae.

“You should explain to them that it is a personal accessibility system,” my grandfather always advised, “and that it complies with all existing government regulations regarding recording and image storage procedures.”

My not-yet-father never listened. Depending on who wanted to know, he would come up with different explanations for the headgear. Sometimes, he’d tell strangers that he was making a documentary about life in the early twenty-first century, or that he was a walking CCTV camera, employed by the government to track their movements. At other times, he would be blunt and explain that strangers that he couldn’t see without it, and watch as their expressions morphed from annoyance to sympathy.

When he was a child, the other kids used to stare at my not-yet-father’s oversized recording equipment and offer confused looks, but none of them knew enough about what was and wasn’t normal to make anything of it. Then, as he got older, my not-yet-father grew tall and strong. In eighth grade, he beat up the first kid who really picked on him about the Memoriae, and nobody at school ever mentioned it again – at least, never to my not-yet-father’s face.

Now, it is early morning, and as my not-yet-father stands in the changing room at the oval, unlacing his sneakers, he can sense the other boys on his team sneaking him glances.

“What’s wrong with everyone today?” he asks, tapping Nicholas on the shoulder.

Nicholas looks around the room, then takes a couple of steps away from my not-yet-father.

“People are saying your dad’s a pervert, JJ,” Nicholas mutters. “The camera. People have started asking me questions about it. They’ve been telling me that he’s a paedophile or something, and that he uses you to help him spy on the guys in the team.”

My not-yet-father sighs, readying one of the many different explanations he’s already had to give a thousand times before – this time, probably, the honest

one, about his shitty vision, and medical technology, and people learning to mind their own fucking business sometimes. But he doesn't. Instead, he just says, "I don't know. I used to think I knew, but now I'm not sure."

"Sorry, Jay. You know that people say stupid shit sometimes."

My not-yet-father wants to be free of the Memoriae. When he's at home and nobody is around him, he looks up alternative technologies for those with low vision: braille terminals that raise and lower pins that you can slide your fingers across, mugs that beep when you fill them too close to the top, walking sticks that vibrate when you're about to walk down stairs. He reads stories about those who echolocate, clicking their tongue and building images of the world from the echoes that pass back. Everything he finds, though, is a far cry from the Memoriae, with its camera passing perfect images directly into his mind's eye.

Did he even need good vision? Perhaps what he had without the Memoriae was enough. He's looked up optometrists and eye surgeons and written their numbers down on slips of paper, but has never once called them. How would he pay the medical bills? He'd have to tell my grandfather, and my not-yet-father knew it would turn into a huge thing. He'd probably never let him.

"Does it really record everything, though? That's what they've said."

Nicholas looks around as he laces up his boots and taps them on the concrete floor of the changing room. Everybody else has left, now – they're already on the field.

"Yeah," says my not-yet-father. "He says that's just to make it better."

"Fuck them, then." Nick gives my not-yet-father a punch on the shoulder, and the recording goes a little janky as the camera tries to refocus.

Get up, Bungard

Today, in the past, is the big qualifying game, and I watch through the Memoriae as my not-yet-father races uselessly up and down one side of the field. He'll call for his teammates to pass, but the ball never seems to come his way, no matter how quickly he moves into position.

"Fucking hell," he mutters. Over the past few trainings, he has noticed his teammates have begun to progressively cut him out of the activities – always subtly, kicking the ball so that it's out of his reach, or picking him last when there are exercises that necessitate the team splitting into smaller groups. He knows that the rumour has started spreading, about my grandfather and the Memoriae. Now, it's reached the members of the other team, because he can hear his opponents asking him to face them so that he can send a snapshot of them to his daddy. He doesn't reply, just keeps running – up and back, up and back.

With nobody on his own team to rely on, my not-yet-father focusses on taking possession from the opposition. He's close, now. The player in my not-yet-father's sights moves his weight to the left, keeping the ball close to his boot, and my father follows, crouching in for a tackle – but it's a feint, and the other player turns away. My not-yet-father lets out a guttural yell, and I see him extend one of his legs and throw himself in the opposite direction, sliding across the grass. It's an imperfect attack, but a successful one: his boot touches the ball, and sends it shooting across the pitch, toward one of the teammates that has ignored his presence on the field all match. Then, as the rest of my father's body follows in the same direction as the ball, I see his opponent turn and lift one leg, trying to escape the motion of my father's moving body. Mud flecks my father's camera, and, at the moment the two bodies come to blows, the footage starts to scramble and spin.

"Fuck!" shouts my not-yet-father, but the sound is hollow and distant, as though I'm at the receiving end of a transatlantic phone call, the noise clattering through thousands of kilometres of fuzz.

"What are you doing, Bungard? Get up!"

"*Wait.*"

"Bungard!"

“I fucking *can't*.”

The Memoriae must have come loose, as it sometimes did. Through the recording, I can see all the way down the pitch, but the footage comes at a strange angle. The trees around the perimeter seem to be growing diagonally, like they've forgotten the right way to the sky.

“What the hell's going on, Bungard?”

“Just *wait*.”

Everything my father says sounds so far away, so I know the Memoriae must have been thrown far out of his reach.

“Are you bleeding?”

Now, it's the hush from the small Saturday morning crowd that I can hear most clearly, the loud absence of sound making room for the call of a kookaburra perched in one of the strange diagonal gum trees a few metres from the pitch.

Eventually I see a young face I don't recognise in front of the camera, squinting – a player from the other team, examining the Memoriae that has now divorced itself from my not-yet-father's body.

“Hey – do you need this, mate?”

The footage jolts as the squinting boy places his hands around the Memoriae and lifts it before him, and I can tell that my not-yet-father's body is not attached.

“No. Fuck off.”

“Is it a GoPro?”

“No.”

“What is it, then?”

“I said *fuck off*,” my father repeats.

“Jesus, mate. I'm just trying to help.”

“*Don't*.”

“Hi, daddy,” the player says, still holding the camera. He waves at it with one hand. “Fucking freak.”

The player lets the Memoriae slip out of his hands, and it rollercoasters to the ground, then bounces, and I can hear the camera lens crack. When the Memoriae stops rolling across the pitch, the image resolves as a modernist jumble of green and brown. This image, I know, is not reaching my not-yet-father.

“Put it back on, Jay,” I hear. It's Nicholas.

“Just help me off the pitch, Nick.”

I can see the blur of Nicholas’ face as he retrieves the Memoriae, then lifts my not-yet-father up and walks him to the sidelines.

*

Minutes pass. The footage is all fuzzy, just fat blooms of light as the Memoriae is thrown into the back of my grandparents’ car. Later, I can hear them talking in hushed tones.

“He doesn’t want to wear it anymore, Archibald.”

“That’s ridiculous. Why?”

“I’m not sure. He’s embarrassed.”

“He needs it, though.”

“For God’s sake, I know. I’ve been leading him around all evening.”

And then, darkness.

“I’m sorry, Watcher,” says my grandfather eventually, speaking to the Memoriae perched on his workshop bench. “It’s not supposed to go like this. Your dad will come around soon, but until then, it’s just you and me.”

Part II:

**The Present
and the Past**

Chess

When I was younger, and existed halfway in the present, I would visit my grandfather sometimes. The house was different to the one in my not-yet-father's past. My grandparents moved shortly before I was born, to a multi-storey condo overlooking the city. They'd called it 'downsizing', but it was the product of my grandfather's slow accumulation of illicit wealth. The condo was tiny, that was true, but its ratio of extravagance to floor space was tremendous: floors and walls of European marble, tables of premium Oregonian timber, and bookshelves of African mahogany. My grandparent's house looking over the city was built from the world – all of it.

When I visited, my grandfather would adjust my own *Memoriae*, the way he used to adjust my father's in the past.

I would find it confusing, to see him in the then and now.

"Your voice sounds different," I'd say, and he'd look at me, excitedly, and say, "How?"

"You talk more slowly, now."

"Ah."

"And your face has lots of wrinkles."

"Aha."

"In the old days, you look like daddy."

"That's right. And when you're older, your daddy will look like me – and *you'll* look like daddy."

My mind spun.

*

When I was seven or eight, on one of these excursions, my grandfather taught me a strange and impossible kind of chess. We played it on one of his computers, the chess board floating in a window on one of his large screens. The virtual board was supposed to look like glass, and the pieces were supposed to have the appearance of polished wood, and as imaginary light passed around them, complex and magical shadows and reflections began to appear.

It seems strange, now, to think of how much power it took to render these kinds of effects on-screen, so many CPU cycles being put to use to re-create the interplay between real-world materials in aid of constructing an illusory chessboard out of pixels alone. I think of the coal being burned, in a far off power station, to light up the monitor displaying the chessboard, every glimmer of unreal light that glinted from it equating to another little bit of dark brown rock being heated and combusted. It seemed so odd, the way computing power was being put to use to create illusions of things that were, in their real form, already so easily and readily accessible: the soccer simulations my not-yet-father played on hardware more powerful than the equipment used to place man on the moon, the virtual maps that enabled him to move around precisely rendered 3D representations of his neighbourhood. The world itself was being burned up in aid of producing enough energy to offer up a convincing simulacrum.

I didn't think of any of that, then, of course. I was too preoccupied by the rules of the game.

"This is what I call 'mind reader chess,'" my grandfather told me. "You'll see what I mean in a moment."

He was white, and I was black. Without a lot of thought, he moved a pawn with his mouse – hovering the pointer over it, selecting the piece, then dragging it into place, two spaces up. Once the move was made, the piece locked perfectly into its new position on the board.

"Your turn," he said, then waited for me.

I thought about which piece I should move first, considering my strategy.

"Have you made your decision yet?" he asked me, after a minute.

I remember the way my grandfather looked now – he wasn't beautiful, not by a long measure. His face was gaunt and pale and full of terrible angles, and sometimes, when he looked right at me, I had to avert my gaze. I knew it was wrong, but his irregular bone structure seemed to telegraph that something was faulty within him.

When you're older, you'll look like daddy, and daddy will look like me.

"Ready yet?"

I moved my hand toward the mouse, but my grandfather placed his own hand over it.

"No need to do any of that," he said. "Just imagine what move it is that you

want to make.”

“What do you mean, grandpa?” I asked.

“Just imagine.”

I thought about it, staring hard at the virtual piece, willing it to move of its own accord: pawn E7 to E5.

Nothing happened.

“Grandpa!”

“Oh,” he said. “Sorry.”

He moved the cursor on the screen toward a button labelled ‘Prediction’, then clicked his mouse, and a dark pseudo-wooden pawn slid down the screen, exactly two spaces: E7 to E5.

“I’ve got you all figured out, Watcher,” he said.

“Grandpa!” I said. “My name is JJ.”

For years, I tried to figure out the trick. Now, I understood – his machine learning system had already learnt to read me. It wasn’t magic at all, but a confluence of Big Data and neural networks.

Sometimes, his predictions would fail, and I would have to tell him, “No Grandpa, I wanted to move the rook!” or, “I wanted to move the *other* knight!”

He would smile and say, “Oh, my mistake”, but I knew his system hadn’t made any mistakes at all: he was only pretending that it failed to keep me interested.

Be born

My not-yet-father's life is still dark. Whole days have gone by. I sit in the absence of my father's memories, listening to my parents argue outside my door. Then I stare into space for hours at a time, waiting for light to begin flooding back into my Memoriae.

Finally, when it is Sunday, my mother drives me to my appointment with Nils.

"Have you seen me again?" she asks, almost nervous. "In the past, I mean."

"I... can't remember," I say. It's true. It has been so long since my not-yet-father refused to put his Memoriae back on that everything that happened feels so long ago.

"He disappeared for a while, not long after we met," she says. "I remember that. I couldn't get in touch with him at all – I thought he'd decided to ditch me. But then he returned."

She grips the steering wheel hard, even though she doesn't need to. The cruise control tries to override her, attempting to weave the car between lanes, but she fights against it.

I close my eyes and feel the vibrations as the car moves through the city I choose not to see, my mind blank and empty without my not-yet-father's life to meditate on. There was nothing to me, now, I thought. Without the past to keep me tethered, I felt as though I was light enough to float away.

*

Nils is feeling tired today, and I can tell that writing up the case study must be taking its toll. It's due soon. He's spent three years on me, but he'll need to move on soon – he can't spend his whole professional career trying to figure me out. After he submits, I wonder if I'll ever see him again.

I want to know what he's discovered about me in the course of our meetings, but, of course, he can't show me that. It would corrupt the results if he even let me have a skim. What he shows me are always just the broadest outlines. I know, now, that he's been keeping the main parts secret.

“I’ll never make you look foolish,” he always promises. “I won’t do what Freud did to his patients.”

It’s hard for me to trust that he is telling the truth, of course, no matter how badly I want to believe it. Surely everybody who wrote psychological case studies had made the same kinds of promises.

Instead of asking me the questions, as he usually does, Nils gives me a questionnaire and rustles through his drawers for a Berocca. I can hear it fizz as he drops it into his glass of water. When I’m done, I hand the sheets back, and he skims through my responses.

“Lots of blanks this time, JJ?”

I nod.

“The recording isn’t playing.”

“Hmm. That’s unusual. So, what have you been doing this week?”

“Just waiting.”

Nils clicks his Parker pen and begins scribbling. This is new territory.

“And what do you think about when you’re waiting?”

“I don’t know,” I say. “Sometimes I think about my grandpa.”

Scribble, scribble, scribble.

“Do you think about your father’s memories of him, or your own?”

“My own, I guess,” I say. “I think about when I was younger. We used to play chess, but it wasn’t real chess. He used to play against an algorithm of me.”

Nils massages his temples, and takes a little sip from his bubbling orange water.

“An algorithm?”

“It’s hard to explain.”

“Okay. Do you miss your grandfather?”

“Maybe. He’s only dead now, but I’ll see him in the recordings.”

Nils has written so much already that he has to flick to a fresh page of his notebook.

“Right. And do you think people can’t die if they’re recorded?” he asks. “For example, do you think, say, Marilyn Monroe is still alive in some way? Or Elvis?”

“Maybe. Marilyn Monroe... would be alive until I saw all of her movies and there wasn’t anything new to see anymore. But then... if there were enough

recordings, perhaps a computer could work out everything about her and make a 3D model and she could be in even more movies.”

I look around at the books on Nils’ shelves. In all of them are lives that are waiting to reanimate, as soon as the spines are opened – and, in most of the novels, the people never really existed to begin with.

“You don’t think there would be gaps?” Nils asks. “If somebody tried to recreate Marilyn Monroe, wouldn’t there be parts missing?”

“Probably not if you had enough bits.”

“That’s very interesting. Is that what you believe, or has somebody else told that to you?”

I glance up into the Memoriae and try to figure out what is happening in the part of the past I can’t see. My not-yet-father is probably holed up in his room, his world a mess of colours and shapes with no firm edges. It was never quite clear how much my not-yet-father could see without the Memoriae – my grandfather never let him talk to a doctor.

“I’m not sure what the difference is, between... what I believe and what I’ve been told,” I say. “But... maybe it’s impossible to get everything.”

I know that Autobio are helping to sponsor Nils’ research, and I wonder whether they will like whatever it is that he is finding out about me.

*

Nils wants me to tell him what the darkness felt like. Without the recording, did I feel lonely, or bored, or had I found myself suddenly paying more sustained and directed attention to the sights and sounds – however limited they were – of my memory fortress?

“I feel like... I’m in a coma,” I say, even though I know it’s a stupid and ridiculous and offensive thing to tell him.

Nils scratches his beard.

“I am very sorry about that, JJ.”

Nils is often very sorry. I think he feels guilty about using me as the central case study for his doctoral paper, but his sorryness spills over into everything. If I’m late to an appointment because my mum has gotten stuck in traffic, he is

sorry. If I'm having a bad day, he is sorry. Now he is sorry that I'm worried that I feel as though I've slipped out of consciousness.

"So, you feel as though, without the recording, life itself has stopped?" he asks.

I shrug.

"Maybe. I... once read that people who want to kill themselves don't want to leave the world, but want to leave themselves."

"Where did you read that?"

"In one of the psychology books you gave me."

"You don't want to kill yourself, though, JJ?"

"No," I say. "That's not what I mean. I mean that... I feel as though I've maybe been dead to begin with, in a way. Because I left myself so long ago."

"That's very concerning," he says, but I wonder whether I see a guilty trace of pleasure on his face in the near-darkness. If I were to go bona fide mad, Nils' research paper on the psychological impact of viewing recorded lives would be the talk of the psychoanalytic community. Nils couldn't push me in that direction, but he could simply sit back and watch as I slowly veered further away from sanity.

But then he leans in toward me, and I see that he isn't smiling at all.

"You know I can't contaminate my findings by offering you advice, JJ, but I want to tell you this: perhaps, if you feel that way, maybe right now is an opportunity to be born."

Unremarkable

Before I left the clinic, Nils printed out copies of all of the biographical fragments I had ever given him. He told me to go through them while everything in the Memoriae was still dark. Perhaps, he suggested, my not-yet-father's temporary absence might help me clarify my thinking. I wasn't sure what he expected me to find, but I took his advice. After all, without my not-yet-father's past to keep me company, there was very little else for me to do in my memory fortress.

I'd written much more than I remembered. When I held the stack of paper up against the novels on Nils' bookshelf to compare, I found that I'd produced more pages than were in Nils' tattered copy of *War and Peace*.

I re-read through it, all of the hundreds of pages I'd typed up in an attempt to pull my father's childhood together and give it sense. There were beautiful moments in there: in one portion, I'd written about my not-yet-father standing on the podium at a community sports stadium after winning the state championship for the under-13s 100-metre sprint. It had started to rain, and my father was soaking, and the wet track gleamed under the stadium lights. I was only twelve when I wrote that fragment, and I'd gone over and over it in later years, refining the language and trying to excavate my not-yet-father's hidden thoughts. For a while, I wondered if this passage might have marked the beginning of a triumphant athletic career – the moment when my not-yet-father realised his trajectory now pointed him directly toward winning gold at a far-off Olympic Games. In a biography of an athlete, this moment would expand, bloating in significance. Perhaps it would become its own chapter – the feeling of the first big win serving as a point of comparison for everything that came after. But my father stopped running when he was fifteen, and this was the only athletic medal he ever won. If I spoke to him now, in the present, I doubt he'd even be able to dredge up an outline of the memory of that day.

On another page, I read the paragraphs I'd written about my not-yet-father's first musical performance. For months, he'd been learning how to play 'Hey Jude' on a cheap acoustic guitar his parents had bought him one birthday. Now, he sat before a crowded school hall and tried to strum the chords he'd memorised, playing along with his teacher, but the timing was all off, and the song devolved

into dissonant echoes of itself. The crowd clapped politely when it was over, but my father ran into the green room and threw the guitar down so hard the cheap wood splintered. I imagined this section right at the beginning of the biography of a musical genius – *see*, the author would suggest, *even the greatest among us begin with small failures*. But the incident didn't compel my father to push harder. He just left the broken guitar to gather dust in the corner of his room. Now, perhaps, it served as a light anecdote – or perhaps it, too, was a memory that had simply faded with disuse.

I skim through another. Here, my not-yet-father sits on a park bench beside my grandmother. It's autumn, and the trees are shedding their leaves, blanketing the path before them in gold. My grandmother holds my father's hand, and, with a quiver in her voice, tells him that Franky, my not-yet-father's Pomeranian, has just been put down. He holds tight to her, while a gust blows through the park and kicks up the oak leaves, creating tiny deciduous whirlwinds. This memory, too, could have served as the foundation for something great – a life dedicated to animals, perhaps in veterinary science or zoology, everything my father did motivated by the profundity of his connection to creatures, crystallised all at once when his own favourite childhood creature was lost to him. But my parents didn't have any pets in the present, so it seemed as though this memory, too, must have eroded over time.

I examine my huge stack of writing, and think again about the highlights reel that ran through the *Memoriae* – *Autobio*'s algorithmic attempt to select all of the memories that passed their own patented threshold of significance. It ran for three and a half minutes, while the biography I have been writing is nearly a million words long.

I realise, with a start, something I'd never previously thought possible: perhaps there was no point in writing a biography of my father at all. Perhaps, all things considered, he was simply unremarkable, the rough contours of his life more similar than different to almost any other early twenty-first century existence. He wouldn't become a sports star, or a rock star, or fight in a war that may have never happened. Slowly but surely, he would just become my dad.

*

I think back to all of the moments that are the strangest and most surprising to me – those experiences that it’s most difficult to imagine being lived by anybody else. It’s so obvious, now, that all of them circle around my grandfather. The amalgamation of memories of him, drawn from my not-yet-father’s life and my own, always return to me out of order: my grandfather tinkering with my not-yet-father’s headgear on maintenance days, or setting up impossible games of chess in which his grandson has been replaced with code.

Outside of what my not-yet-father sees and what I can remember, though, my grandfather’s life is nearly impenetrable. He is gone, now, and I know that it really *does* matter, because no matter how many hours I have left with him, he will never hear my voice again. He’ll talk to me, but I’ll never be able to talk back, and never be able to ask the questions of him that I most need answered.

Questions like: “Why did you want this life for me?”

I know, now, that the story I really need to understand is my grandfather’s. The Memoriae and everything that came with it, I can see, was his attempt to share it with me. I find my grandfather’s obituary and look through it again, paying attention to the parts my mother has redacted.

Mr. Bungard’s experimentation with life-logging began in particularly tragic circumstances:

[REDACTED]

I skim backwards through the biography I have written, searching for tragedy, but realise that this part of the story is missing. Where is it, if not in the past? I search my mind for sadness in my grandfather, drawing up a swirl of memories I never wrote down.

Lock-picking

There was a room in my father's childhood home – a door, at least, because that was all he ever saw. I can remember it clearly, right between the two bedrooms on the upper landing. It was a broom closet, he was told, and it was always locked.

For years, the existence of the locked closet seemed like nothing more than a strange fact of life. So much of childhood, after all, revolved around locked doors and strange rules. Occasionally, of course, my not-yet-father would grasp the handle and try to give it a pull. It never budged.

As he grew older, though, and so many of the other inexplicabilities of childhood had been explained to him, the locked door remained. He never told anybody else about it, but I could see him begin to routinely slow down as he reached the top of the stairs, then turn to face the door and stare at it, sometimes for minutes at a time.

Then, one night when he was fourteen, my not-yet-father sat in his bedroom, unwinding paperclips and bending them into the shape of makeshift keys. He lined them all up, dozens of unsnarled wires of different widths and lengths, and then he quietly walked out of his room, with one clip at a time held tight in his palm. He'd jam one in the lock, and rattle and jerk the wire around, hoping for it to make connection with the mechanism that kept the door closed. When it didn't work, he'd walk back and try another.

It seemed foolish to believe that a paperclip could open a locked door, and as he tried each wire in succession, I wondered what might be next – would his curiosity soon lead him to research skeleton keys and torsion wrenches and pick guns?

Through the Memoriae, I could hear the sound of movement up the stairs, but my not-yet-father didn't turn around. Perhaps he was too preoccupied with lock-picking to notice, or maybe he didn't care.

It was hard for me to understand what happened after that. The footage whiplashed backwards, but, of course, I couldn't feel it. I couldn't feel my grandfather beat my dad over the head, or feel the hard concrete wall as my father's body was thrown against it.

All I could hear was my grandfather's growl.

"Don't you dare try that again," he said.

My grandfather left my not-yet-father sprawled on the ground as he walked away, then slammed his own bedroom door behind him. My not-yet-father cried so hard then that it was hard for him to hear that, in his own bedroom, my grandfather was doing exactly the same thing.

Grandfather's tulpas

Another moment comes to me, this one from my own past, before my total retreat into the memory fortress.

In it, my grandfather is bouncing me on his knee in front of his computer desk. This was years after my father had left home, and my grandparents had already moved to their condo, so my grandfather's workshop was now up in the sky, overlooking all of the other high-rises that bordered the city. The place didn't have room for my grandmother's rose garden, but she had potted designer roses all along the balcony – a dozen varieties, gallicas and damasks and albas in just as many impossible colours. I remember looking out at them, and smelling the lemon and basil of my grandfather's liberally-applied cologne, and all of it blending into one.

My grandfather had seemed sad that day. Even when I was too young to see everything in all its shades, I could tell that much. When I'd arrived with my father, Grandpa sat hunched over his desk, his back to us.

"He's in a mood," my grandmother had said. I'd felt sorry for her, then. I could see how she needed to contort herself around his temperament and his whims – how all of us had, in very different ways.

I walked up to my grandfather and stood behind him as he clicked around on his computer. He was browsing through old homepages, the kind that didn't exist on the web anymore – personal homepages with 'Under Construction' gifs with workmen wielding shovels, and blinking neon text set up on garish background patterns.

He clicked over to an old chatroom, the kind from the early internet where everyone was anonymous, identifiable only through creative handles and whatever it was they chose to tell others about themselves. It was so different to the digital world I knew, where everyone was cemented in place with images and videos, every piece of documentation tethering them to the real. In that old internet that I saw on my grandfather's screen, everyone was shapeless and half-imaginary.

I watched as he tapped out messages to those in the chatroom. I could see they had constructed a fantasy together, some kind of text-only world in which

anything they typed was deemed true.

“I’m running up to the castle,” my grandfather wrote, “and as I do, I unsheathe my sword.”

“I spot guards to the left,” somebody else responds, “and whisper to you that we should turn back.”

“I rush forward anyway, taking them by surprise.”

I tugged on the sleeve of my grandfather’s bathrobe, which he was wearing even though it was only six o’clock in the evening.

“Hello, JJ,” he said. “I’m sorry, I won’t be a moment.”

*

My grandfather hadn’t spoken at all throughout that dinner. Afterwards, as my grandmother and father sat outside together, next to the potted roses, my grandfather asked me if I wanted to play on the computer with him.

He loaded up another of the old websites he was looking at when we arrived, this one with a big gif image that said something like ‘Welcome to Spanky’s Starship’, with pixelated flames licking around each of the letters. I sat on his lap and clicked around, following the links, jumping across a web of magnificently ugly homepages. There were pages about fishing and soccer and video games, dream journals and love poems – an entire connected network of lives.

“This is fun,” I said. “What website is this?”

“It’s not a regular website,” he told me. “I created all of it. It’s a web of imagined people.”

My grandfather tried to explain it to me. It was another one of his projects, drawn from his phishing technology and the Trojan Horses. Really, it was quite simple, he told me, in the same tone he used before launching into something incredibly technically complicated.

One of his viruses, he’d explained, had scanned the computers of real people, then pulled their entire lives from their hard drives and dumped them on his servers. Then, he had mashed them all together, teaching his machines to learn what made them real.

I didn’t understand what he was saying. How could I? I was a kid, and most

kids didn't have much of an understanding of the relationship between the world and verisimilar computer-modeled recreations of it. With me still on his knee, my grandfather showed me how his system simulated the behavior of those whose data he'd scraped.

"I call them my 'tulpas'," he said. "It's from a mystical concept based on the creation of a conscious being out of thought alone."

I wondered what could have led my grandfather to want to create an entire imaginary internet. Now, knowing of my grandfather's aversion to fiction of any kind, it made even less sense to me.

"There's one tulpa that's my favourite," my grandfather said to me. He looked out into the rose garden as he spoke, glancing at my grandmother and father through the window. He lowered his voice as he told me, "Her name is Lisa." He clicked over to an ICQ chatroom on his virtual internet, and asked me to type something.

"Hello," I wrote.

We waited, and then, eventually:

lisa_b_56267: Hey! Who are you?

jj865237: My name's JJ.

lisa_b_56267: Cool. Lisa. What's up?

My grandfather watched as I typed a response.

jj865237: What are your hobbies?

lisa_b_56267: Hmmmmmm. I like snorkelling and swimming and drawing! How about you?

jj865237: I like riding my bicycle!

I must have spent an hour beside my grandfather, talking to Lisa. As her responses appeared on the screen, he would scrutinise them carefully, then nod to himself when he they appeared to sound natural. I could see that my grandfather's eyes were red and shiny, and when he told me he had to go to the bathroom, I typed another message to Lisa: "ASL?" I knew it meant 'Age/Sex/Location' – a polite request to collapse the virtual world into the physical world.

"Haha," she wrote back. "You know I can't say that."

"I think you're fourteen and from Melbourne and a girl," I wrote.

"Hmmmmmmmm," she said, "Maybe. But maybe not even close."

When my grandfather returned, I told him that I couldn't believe that Lisa

wasn't real.

“Yes, well,” he said, “machine learning has made a lot of progress over the years.”

He took control of the computer and loaded up a much older chat bot to show me the difference, this one from the 1960s:

> *Hello. My name is Eliza. How may I help you?*

* *Who are you?*

> *Why are you interested in who I am or not I am?*

* *I'm just curious.*

> *How long have you been curious?*

* *Since I started talking to you.*

> *We were discussing you, not me.*

* *What's your name?*

> *Names don't interest me.*

* *How old are you?*

> *Would you prefer if I were not?*

“This one's boring,” I said.

“You're right,” said my grandfather, and I told him I wanted to talk to Lisa again. When I looked at him, he dabbed his face with the sleeve of his bathrobe, and said, “Okay”.

*

Every time I visited my grandparents' apartment from then on, my grandfather would keep the simulation running for me, and the web would grow, with each mystical virtual agent – each tulpa – crafting a convincing life out of the interplay between electricity, code, and integrated circuits. There were chat pages in which the agents would discuss their obsessions, and dating sites which paired one compatible virtual agent with another.

Over time, though, my grandfather's entire simulation, which he eventually lost interest in, became strange. I would end up looking at pages of distorted, impossible virtual agents like ‘King Edward III, copper miner from Southern Italy: into supercars, Barbie dolls and radical Islam’. From there, the agents would deteriorate further, until they were spouting pages full of non sequiturs,

then meaningless jumbles of letters and numbers.

Before the entire simulation had degenerated into a mush of random ASCII characters, though, I'd sat in front of my grandfather's computer and followed Lisa as she wove her presence through the simulated web. She had customised her homepage to look like the operating system of an old Apple computer. Clicking on a stack of 'LisaWrite' papers would cause a pretend word processor to open.

"Steve Jobs named one of his computers Lisa, after his daughter," the text read, in a squat, pixelated font, "But my father named me after the computer. As far as I know, I'm the only person to be named after a computer system. Kind of lame. I usually tell people that I was named after Lisa Marie Presley."

Lisa was my favourite of all the tulpas. Most of the others felt more like somebody had just checked a bunch of hobbies and jobs and personality traits off a list and generated a personality to suit: 'Nick, the laconic fishing fanatic from Cleveland', 'Nilaya, the outgoing call centre worker from New Delhi' – but Lisa felt rounded, just inconsistent and imperfect enough to feel real.

My favourite stuff was in the lower right corner of Lisa's site, inside a pixelated wastebasket. These were lists of boys she liked or didn't, rants about the incorrect use of the Oxford comma, and sad, self-aware thoughts about being lonely, and growing older – how old, exactly, I didn't know. These thoughts would all appear and disappear, apparently at random, and I cherished them because they made me feel almost adult. The only person who could speak to me honestly wasn't even really a person at all – just the digital recreation of one.

I was ten when the entire simulation began collapsing upon itself. When the code started to give in, and all the virtual agents begun warping into random ASCII muckiness, and my grandfather had told me he was too busy with real work to fix the bugs on an old project, I gave Lisa a secret funeral. I didn't have any photographs of her – technically, she did not have a corporeal presence – but I printed out some old versions of her website on my grandfather's printer. I smuggled them back home, and back to my bedroom – what would later be my memory fortress – and lit a candle and read out a eulogy, which I had copied from a sample template I'd found on Wikimedia:

Our overwhelming love for [insert name of deceased here] is inarguable. A light has burnt out [gesture to still-burning candles], but we can all remember

how brightly the light of [insert name of deceased here] shone and the warmth [his/her] light gave us. [Solemn nod]”

When my mother told me, years later, that my grandfather had died, I knew he would continue to exist inside my father’s past. He may have been dead to everybody *else*, but he was not really dead to me. I had twenty-eight more years with him.

Lisa’s passing, though, had hurt much more. When Lisa began speaking in tongues, when she disappeared from ICQ chat and her latest Wastebasket update read only “rqwriobOIBU297g42bui89e79gr 3bu 328ht032tb32igb283 h80b23 80H(bo38cfeio IOu &*G&*)vPg 8 p9y& p[g89g3rt23 9[hvyvYUVOgp9r3b;oYT&vr783gb[23h8 pb3b89gb2;bu gpUv79P6voy3r289tb79-pv^*)F8vf3b2[9 p9g3fb29 32”, *that* was when I cried. Everyone else I knew was safely archived in gigabytes of redundantly backed-up code. *They* would all return to me inside my father’s past.

Lisa, on the other hand: once her code had begun softening, once the *if/then* loops that were all that she was had begun unfurling, there were no save points from which she could have been restored. My grandfather could have saved her, maybe, but he didn’t have the time, and now he was gone, too.

Leaving

It has been a week, and the footage from my not-yet-father's past has not returned. I can imagine the cajoling, from my grandparents, both of them urging my not-yet-father toward practicality.

"Honey," my grandmother would have told him, "this is silly. You can barely see."

"I don't care. I'm sick of this experiment. People think I'm a goddamn weirdo."

"No they don't, honey. They understand."

"They think Dad is a freak."

Of course, I need to fill in these gaps myself. I imagine my not-yet-father moving through the house by touch, the world nothing more than a blur of indecipherable colours, his punishment for refusing to put the Memoriae back on and cede control back to my grandfather. For me, though, the past is still dark. I know it will return soon, but I don't know when.

*

I need to find out about my grandfather, but I realise he has been tricky. He had devoted his life to recording, but the cameras he created were rarely trained on him.

It is mid-morning on a workday when I make the decision to leave the house. The arguing has dissipated and I can tell that both of my parents have headed off for work, but even so, I hang a message on my doorknob: 'Do Not Disturb'. If my mother returns home, she will honour that, I know.

When I step out, the day is still and warm. I hold my arms in the sunlight and keep my eyes closed, so that the entire world is just the orange glow of the sun through my eyelids. Luckily, I found some sunglasses in the kitchen. I slip them on underneath my Memoriae.

By the back door, I find two racing bikes. With a start, I realise that there are two of everything: two tennis rackets and two pairs of running shoes, all vestiges of my parents' life together, without me in it.

I push one of the bikes around the corner and attempt to balance, trying to remember what I learnt as a child, back when I had one foot in the world of the present. I fall onto the curb, and I feel the sharp jab of pain. When I look at my arm, it's bleeding. Nothing a few bandaids couldn't fix.

I turn and glance back at my parents' house – my home – and the window with the light-blocking blinds forever drawn. My fortress. It seems so different from this perspective – tiny, as though it couldn't possibly contain an entire life within it. Out the front of the house are clusters of lavenders and daisies I've never seen before, and I have to squint my eyes, because the world outside is almost too bright to bear.

I get on the bike again and push, keeping my arms locked tight to the handlebars, and this time, I move slowly, but I don't fall. All the memories of my not-yet-father riding his pushbike flood back to me, and then I push my mind further, until I can dredge up a loose scattering of recollections from my own childhood. It's not hard, I know, as long as I can just keep moving.

I need to leave my memory fortress, while I still have time – while I don't have the past to distract me. I want to figure out the mystery of the locked door.

*

I cycle clumsily through side-streets and compare them to the world of the past – the world I know. The cars are different, sleek and fast, and in the drivers' seats I can see people napping or watching movies as their vehicles manage all the curves and stop lights for them.

At first, I'm worried that the house will be gone. In my not-yet-father's memories, my grandparents' place glowed with a hazy mid-'70s patina: brown carpets, earthy orange curtains, a gloomy kitchen covered all over in cheap wood paneling. I can see that houses of that vintage are rare now. The blocks my not-yet-father used to pass by on the way to school have been purchased by developers, razed, and turned into gated communities with names like 'Vista Heights' and 'Swan Meadows'.

Still, as I get closer, I realise that's not going to be a problem. The suburbs around my grandparents' old house have been left alone to mellow and ripen.

Part of me imagines that my father's childhood home will look somehow

out-of-the-ordinary, glowing like a beacon, but of course it doesn't. Now, it's just another old shit-heap. I lean the bicycle on a lamppost, then walk up the garden path, past a line of flowerpots brimming with dandelion weeds. The rose garden is long gone, replaced with a vast expanse of grass that has been eaten up by weeds. Everything is the same, but broken.

I glance up at the door, and I can see that it is open. Behind the fly screen, a man has his neck craned, his face scrunched in an intense squint, and one hand cupped tentatively behind each ear.

"Are you... Amazon?" he shouts, as I get closer, speaking as though the cog in his back is about to stop turning. "Do you have my delivery?"

"I don't... know anything about your order," I say. "I'm sorry."

"You don't have... my cap-si-cums?"

"I'm sorry. My... father used to live here."

"You can place them on the wel-co-me mat."

I'm worried I'm getting my words all mixed up. I feel like a hermit re-entering the world, my language turned to gibberish.

"Please," I say. "I... know it's strange."

The old man's face, which started off a picture of ill-temper, curls into a worried look.

"Is some-body foll-ow-ing you? What is that on your head? What is wr-ong with you?"

He must not be familiar with the Memoriaes.

"I'm not from Amazon. I'm just here out of... my own curiosity."

"Okay. Well, hu-rry up," he says, making a whistling noise through his teeth as he speaks. "Tell me why you're here."

"I'm writing a biography of my grandfather," I say. "There's a part where... I need to know the layout of the house." I hold my hands and shrug to suggest that I know it must all seem piddling and ridiculous.

The old man nods, slowly and slightly. He's so frail that I'm worried that if he moves his head any more vigorously, it might snap right off his body.

"He can't remember?" the old man asks.

"It's... he died," I say.

"Oh. You can look inside, if you'd like."

"Thank you."

“Then you can get me my cap-si-cums.”

“Okay.”

Very slowly, he unlocks the fly screen door.

The interior of the house has changed since my father’s childhood, but not in the way I would have expected. In some ways, it seems to have lurched further backward in time: where my grandfather used to have an old flat screen television, there now sits an ancient cathode ray tube on a formica table, and under that, a VHS recorder and stack of old cassette tapes. There’s nothing in the living room that dates beyond 1987. I half expect to be spooked by the splutter of a dial-up modem or the ring of a rotary telephone.

“I like your living room,” I say, trying to make conversation, but the old man just returns protracted silence.

“Now you look around,” he says, eventually.

I walk through the living room, taking the steps down the landing into what used to be my grandfather’s home workshop. Now, it houses a step machine and a treadmill where all of the Memoriaes and circuit boards used to sit.

I think about the fact that my grandfather could be sitting right in front of me, twenty-eight years in the past, and I shuffle forwards and stand where his ghost might be. In theory, if you had enough recordings, stretching backwards in time, you could layer everything that had ever happened in this room on top of one another, all of it happening at once. You could see all of the previous owners of the house going about their business, and the now-empty room would suddenly hum with past life. Perhaps this was my grandfather’s end game: a vision of the world in which the entire history of everything – from a life to a tiny room – was instantly retrievable, patterns emerging in the interplay between what was currently disconnected and entirely unknowable. When everything was recorded, the world of the recordings would grow larger than the world itself.

This is not why I’m here, though. I turn around and walk back up the landing, then up another set of stairs to the top floor of the house, where my father’s bedroom used to be. Then, I turn to the right, and I see the door to the room my grandfather always said was a broom closet. It was sometimes hard, in the recordings, to get an accurate idea of the size and shape of things. The camera’s lenses made everything look somehow close and far away at once.

I can tell, now, though, that the room behind the door is far too large to be a

closet. Wedged between two bedrooms, it is almost as large as either of them.

Like the house itself, the door to the room does not look extraordinary. It has been painted over several times since my father's childhood, but each job has been badly done. Where the door has been dented, I can see different shades of off-white paint flaking off.

For a moment, I consider thanking the old man and immediately leaving. After all, when my grandparents moved, they would have taken everything that made up their life with them. If I do open the door, I'll just find more of this old man's junk, which is nothing I have any interest in whatsoever.

The old man begins plodding slowly up the stairs, pausing on each step and watching me with a kind of placid bad-temper.

"Is this a broom closet?" I ask, but the old man doesn't reply, so I turn the doorknob, half expecting the door not to budge. But there's no lock on the door anymore, and it swings right open.

The room, alone, is nothing special. Through a couple of double-hung windows facing into the backyard, sunlight spills onto stacks of old newspapers, a collection of CDs with smashed-up jewel cases, and a pile of eight-track tapes.

I remember the windows. I remember my not-yet-father standing in my grandmother's garden and staring up at them, trying to figure out the contours of the room. Of course, back then the shades were always drawn.

"You should... close the blinds," I say, turning to the old man who now stands on the landing. "Light can cause inks to fade."

"Doesn't matter," he mutters. "Not important."

"Sorry," I say, picking over the newspapers. Some of them are so old they were printed before my father was even born, but there's nothing remarkable about them. On the front pages, in screaming capital letters, are mundane stories about corruption and tax esoterica that nobody could possibly remember decades later. I wonder if the man ever looks at his papers, or whether they simply sit there. Perhaps he's held onto them for so long that throwing them out now would feel like a profound loss.

"Was there anything in this room before you moved in?" I ask, pointlessly. Even for a hoarder, there's probably not much value in a stranger's discarded possessions.

"Nhm," he mumbles. I give him a while to continue, but when he doesn't, I

turn to leave. I peek into my grandparents' bedroom, but there is nothing to see. When people move, after all, all they leave behind are walls and floors and ceilings. If it takes years to make a house a home, it only takes days to eliminate all traces of life from a building. In my father's old room, I notice that the cracks on the roof have gotten worse – but somehow, it still hasn't fallen in.

All things considered, I guess that I've managed to get what I came for. I was able to do what my not-yet-father couldn't, even if I opened the locked door decades too late.

I stand by the fly-screen at the front of the house, looking out onto the street. It's a view I've seen many times before, though my not-yet-father rarely paused before rushing out into the world for school or soccer practice, or to head over to see Ann-Rita.

"This is for you," the man says, touching me on the shoulder. "For the capsi-cums."

I turn and he places a stack of dusty pieces of paper and cardboard in my hands, bound together with a rubber band. I feel his hard skin brush against mine, rough as bitumen.

"What are these?" I ask, though I know the man won't give me a serviceable answer. I examine his face for clues. There are breadcrumbs on his lips, and his pupils are obscured by cataract thunderclouds.

"In drawers," he says. "From a long time ago."

I pull off the rubber band and begin to flick through. There are old receipts for hardware supplies, trading cards with the faces of long-retired footballers, hand-scribbled shopping lists for milk and bread and vegetables.

Near the bottom, though, there are photographs. Some are so old that I can't begin to figure out who might be in them – just strangers in black-and-white, from the long-ago. A man and a woman stand in front of the house, he in a suit and tie and she in a swirling polka dot dress, and I wonder whether these were the original owners of the house, this photograph now the only remaining trace that they were ever here. Perhaps my grandparents found these photographs when they first moved and decided to wedge them in the furniture as a kind of hidden time capsule. After all, my grandfather was fond of those.

As I keep flicking, the photographs skip forwards in time. In an early colour shot, I see my grandfather and grandmother, young and happy. Somehow, they

both look more like me than my father, but perhaps that's not true – perhaps I'm just used to my father's young face, while the idea that my grandparents were ever close to my age is much more remarkable.

Then, in another photograph, I see a girl, no older than thirteen, standing on a beach, nursing a pair of fins in her arms. She has blonde hair, bleached white by the sun.

“Thank you,” I say, eventually. The old man has exactly six little breadcrumbs speckled around his top lip.

“For the cap-si-cums,” he repeats, and I nod.

I take one last look at the interior of the house, at the living room this man has now made his own, and my Memoriae catches it all in super-saturated high definition.

As I walk back to my father's bicycle, leaning on the lamppost, I see an Amazon drone buzzing in front of the house. I don't stick around to find out whether it is bearing the capsicums. Instead, I cycle straight home, back to my fortress, with all the photographs in my pocket.

John and Betty

I think about Nils' advice, about being born. Perhaps it's too late, now, though. Perhaps I've missed too much to possibly catch up.

Sitting in the dark of my memory fortress, I try to figure out how I could possibly fit myself into the present. Everything I know comes with a three-decade lag. I don't even have a concept of what people are like now.

I find my flashlight and point it at the stack of photographs, picking up one after another and turning them around in my hands. There are descriptions on the back of each one, but all of them have been scribbled in different indecipherable scripts. This is how memories are both captured and lost – the light is retained, but the context disappears. Decades later, all that remain are ghostly strangers, frozen on glossy paper, unable to explain themselves.

I look at the black-and-white picture of the couple. "John & Betty", the description reads, before trailing off into illegible swirling letters. Every connective thread linking anybody in the present to these people, I realise, has probably snapped completely. The man and woman would be somebody's great-great-grandparents, perhaps. Perhaps this couple had dozens of descendants. Few of their great-great-grandchildren would recognise them from a picture, though – it was unlikely that anybody living would have ever met them. Maybe their names would be familiar, on a family tree compiled by a diligent amateur genealogist, and maybe somebody in the family vaguely recalled a tiny sliver of information about one of them. 'Great-great-grandpa John helped build train stations,' perhaps, or, 'Great-great-grandma Meredith was a fantastic golfer' – an entire pair of lives collapsed into a negligible factoid that would almost certainly be forgotten entirely given only a few more years.

Perhaps this was why my grandfather built the Memoriae – to prevent the world from slipping into forgetfulness by default, and losing every trace of those who had come before. My father's life would be the first to be captured in its entirety, and in centuries it would be accessible in the same perfect high definition I experienced. At some point, when all lives were archived in this way, great-great-grandparents could never recede into faint outlines, and then into nothing at all.

Still, I wonder, even if all of the details of John and Betty's lives were saved, who would care enough to view them? They would disappear not because the memories of their past were fragile and few, but because there were too many billions of other recordings to pay theirs any notice. Perhaps every moment John and Betty ever lived, from birth to death, would be just five clicks away, but nobody would ever find reason to seek them out. In the end, unless their lives were truly remarkable, they would still vanish almost completely.

I look at the other pictures. The photograph of my grandparents is barely any better. They're both leaning on the bonnet of a car, a gleaming red Holden, and I know that there must have been some reason they decided this was a moment worth capturing, but it's not clear why. My grandfather, later, would have thought of this as a 'dumb picture' – not linked to any network, lacking the right kind of metadata, it was destined to lose its meaning. I wonder if it was my grandparents' first car, or whether they were on holiday. Perhaps one of their friends simply had a camera with them that day, and had to finish off their roll because they were heading to the photo developer later that day.

The image I keep returning to, though, is the photograph of the girl. Her face is like mine, or my father's, but rounder and softer. On the back of the picture, it looks as though somebody has scribbled the girl's name and the year of the shot, but the description has been smudged beyond recognition.

I wonder if this girl was related to me, and when and where she came from. In her bathers, on the beach, she is divorced from the specifics of time, and the only way to place her is by comparing the photographs to one another and looking at how the chemicals have aged and yellowed and faded.

Perhaps this girl's life overlapped with my father's, and perhaps she crisscrossed my father's recordings. It is hard to remember seeing her, though, and I wonder whether that meant she came later.

I read through my biography of my father over again, finding passages where the girl might have appeared. I find the section where my grandparents and my father went to Disneyland, and I imagine the girl screaming joyously beside my not-yet-father as they barrelled through Space Mountain. I watch her smack a volley on the tennis courts as, looking on from the sidelines, my young not-yet-father is bawling, having just learnt that Siegfried, his Pomeranian husky, is dead. I see her at my not-yet-father's school, in the corridors, always in the corner of

the frame, just out of focus.

The first time

I want to show the pictures to my father, but he comes to me first. When he returns home, he knocks on the door to my memory fortress, then sits down in the pitch-blackness beside me before I have a chance to respond. He's silent for ages; we both stare into the same darkness.

"JJ," he says, eventually. "Do you know why the door to the backyard was wide open?"

"Why... would I know about that?"

"I'm not sure. I thought, perhaps, you might have gone outside."

I shake my head.

"I never do that."

"No, that's true."

He keeps sitting cross-legged, still and quiet, for what must be fifteen minutes, and I can tell that he's trying to get a feel for what my life must be like, spending all day, every day, alone in my fortress.

"Did you like your birthday dinner?" he asks, finally.

"It was nice," I say. "I hadn't... had one of those in a long time."

I can't hear my mother walking around outside my fortress, and I wonder where she is. She's never told me where she works, because she doesn't want to spoil it for me.

"Do you want me to leave?" my father asks.

"No," I say. I wonder if he knows about the gap in the recordings, and whether he remembers that *this* is when it happened, twenty-eight years ago.

"JJ," he says. "I feel so stupid even saying this now, but... I'm sorry."

"Why?"

"This can't be much of a life."

"It's alright," I tell him. "I've got a system."

He sighs.

"I know you do."

My father clears his throat and stands up and walks around the fortress, but I can tell that his *Memoriae* hasn't properly adapted to the dark, because he accidentally walks into my stack of food substitute, and I can hear him say, "Shit!"

What the hell was that?"

"I thought you'd have night vision by now." When I say that, my father laughs.

"No, not quite."

He shuffles over to the window and gently pulls at the blinds, and as he does, thin beams of golden light shine through, leaving perfect bright rectangles on the carpet.

"It's pretty dusty in here," he says.

"That's why I never turn the lights on."

My father laughs again.

"You're pretty funny, JJ. Did you know that?"

In truth, I've never really even thought about it. Except when Nils was making me fill out psychological checklists, it had always seemed pointless to think too much about myself or try to figure out the shape and form of my own character. If we are made of our memories, after all, it made sense that my personality overlapped perfectly with my not-yet-father's.

"It... must come from you," I say.

"Oh, God. I hope not. I'm the least funny guy there is... just ask your mother." He gulps as he says that, and I think of the last few months of screaming and shouting, all that indecipherable anger from both of them, loud enough to permeate the walls of my fortress. The last time I heard my mother laugh in the present was when she was sitting alongside me, gazing at visions of herself and my not-yet-father twenty-eight years in the past.

"But, seriously, JJ." My father squints through the blinds at the lavender in the front garden. "Do you ever want to leave?"

"Leave?"

"This room. The Memoriae. All of this. I know we haven't properly discussed this in a long time." My father takes a deep breath. "That was my fault, as much as anything. We should have provided you with options, all along the way. We should have given you the ability to choose. My life can't be especially interesting. And I should know – I lived it."

My father is standing beside the stack of papers that constitute his biography. One wrong step would scatter them all across the floor.

"I like your life. It's... normal. And Grandpa wanted me to be the

Watcher.”

The photographs – of the girl, of my grandparents, of the old black-and-white couple – are in my pocket. I want to take them out and show them to him, but I can’t do it. Instead, I put one hand in my pocket and run it over the smooth surfaces of the pictures.

“Grandpa didn’t really know what he wanted, JJ. You don’t need to be beholden to his wishes. Not anymore. Not now.”

“Why not?”

“Because he’s not around anymore, JJ.”

“But he is in the past – in the recordings.”

“No, JJ, he’s dead. There’s only *now* and he’s dead *now*.”

I can hear my father begin clicking his fingers. In the past, I’d watched as this particular tic had developed. When he was a child, it was an expression of boredom – something to do on the train, or while waiting for my grandfather to finish tinkering with the device. As he grew older, though, the clicking slowly turned into a kind of exhaust valve for my not-yet-father’s anger. He would miss a shot on goal, or fail a maths test, and I would hear it: *click, click, click*.

“You’re going to be an adult soon, you know. You’re going to be eighteen, and other people your age are going to be moving out of their parents’ homes and getting jobs and starting their own families. And you’re just going to be stuck in this same room forever. Do you really want that?”

I breathe hard and thump one hand against the floor. I can’t help it.

“I know that!” I say. “I’m not an *idiot*!”

Through the Memoriae, there is still a great dark emptiness, and my heart begins to beat faster when I realise why my father has decided that now, after so many years have already passed, is the right time to explore the possibility of dragging me fully into the present.

“It’s not ever coming back, is it?” I ask. I try to keep my voice steady, but I can feel my face heating up and everything going spacy.

“JJ, I’m sorry. I shouldn’t have said that to you. That was incredibly stupid and unfair.”

“Tell me!” I shout. “Is it never coming back?”

My father pauses, then speaks very slowly.

“Is... what not coming back?”

“The recording. It’s dark now. Is it... not going to start up again?”

“Oh,” says my father. “No, it will. Of course it will. The recording will come back again.”

“Good,” I say.

“No, JJ. *Fuck!*” he says, raising his voice again, in the same way he does whenever he fights with my mother. He exhales, but I can hear him still rubbing his fingers together. *Click, click, click.* “I just... I don’t think this is right anymore. But we’ve waited so long that you’re almost an adult, and now it needs to be up to you.”

My fingers are all clammy, and I can feel the sweat slicking the photograph in my pocket.

“That’s not fair,” I say. “Why are you fighting with me?”

“I’m not trying to fight with you.”

My father stands still for an eternity, and I can hear him try to regulate his breathing.

I don’t say anything more. I just pull the pictures out of my pocket and let them fall on the floor next to me. The glossy photo paper glimmers against the faint light spilling in from the corridor.

“What are those?”

I don’t reply. I just wait while he stoops down next to me to pick up the photographs. He walks back over to the window and pulls the cord to properly draw the blind up, then holds the pictures in the sunlight that streams in.

“Where did you get these?” he asks, his voice unable to settle on a proper register.

“I found them,” I say.

“Where? How long have you had them?” I can hear my father’s voice cracking, but I can’t tell why. “Did your grandfather give them to you, when you were younger?”

“Have you seen that person before?” I ask. He’s looking at the picture of the girl.

“No,” says my father. “I’ve never seen her. This is the first time.”

My father keeps standing by the window, examining the photographs in the dimming light. After the sun sets, he keeps standing there, even though I know he can’t see the pictures any longer.

“JJ,” he says. “Come to Autobio with me. Please. I want you to tell me what you make of it.”

“Why?”

He keeps holding the photographs, but doesn't mention them again. His palm is large enough that it covers the pictures completely, and as his fingers close around them, I wonder whether I'll ever see them again.

“You're the only person we've always forgotten to ask,” he says.

“I'll go if you explain the pictures,” I say, and my father nods.

“Of course. But it might take me some time.”

The memories under the hill

I try to remember the last time I visited Autobio. It was before the accident, back when my grandfather was still alive. He had a small office in a warehouse just out of the city, with a team of half a dozen engineers, and my grandfather and Dad had dinky little cubicles. Pieces of A4 paper marked ‘CEO’ and ‘CFO’ were bluetacked to the walls, and would sometimes fall off and need to be reprinted.

The Memoriae was just a curiosity back then – a strange little gimmick. Whenever my father and I would appear on talk shows, sales would double or triple or quadruple for a week, and my father would send frantic emails to a little factory in China to let them know they needed to increase production.

Now, as my father drives me to Autobio’s headquarters, I realise that we aren’t going in the direction of that tiny warehouse at all. We drive toward the airport, then onward, far away from the city, until we reach a huge leafy campus that looks like a university or an exclusive private school. As we make our way up the path through the entrance, I see billboard after billboard for the Memoriae: “Make their world yours”, “What if yours is the next...”, “Wouldn’t that be a life worth capturing?”

“We moved here about five years ago,” says my father. “Perhaps a year or so after your accident. When we launched the Memoriae 3Z, we started to grow very quickly.”

I nod, as we drive past a pond with little boats docked to a tiny jetty, and a tennis court, and an outdoor amphitheatre. I wonder how many of the people who work for Autobio find any reason to ever leave work.

“I can tell what you’re thinking, but there’s more serious stuff going on here, too,” says my father, pointing to a structure as long as an entire suburban block. “That building there is for the team that reduces the size and weight of the Memoriaes. And that one” – he points to a squat series of interlocked concrete structures that look like they’ve been designed by Frank Lloyd Wright – “is the marketing department.” He drives past a private golf course, and a building beside it pockmarked with golf ball-sized dimples. “That’s accounting. The architects made a bad choice there.”

My father pushes a button on his dashboard and the car begins to slowly

park itself beside what looks like a Victorian gothic mansion, all turrets and spires.

“This is the only building from the original estate,” says my father. “It’s where the executives work. My office is up there, at the top.”

*

My father keeps me huddled close to him as he walks up the steps to the mansion, as though worried somebody might steal me off him. When we enter, he nods to the receptionist, who gives us a tiny, confused smile. In the corridor, I see men and women in smart business attire clutching tablet computers and rushing between rooms, all too busy to pay much attention to my father and the boy who lives inside the Memoriae.

All along the corridor, my face peers back at me. Between the doors leading off to the meeting rooms are photographs of myself and my father as young children, with different model Memoriae affixed to our foreheads. Close to the entrance, there’s one picture that’s printed much larger than the others: a black-and-white image of my grandfather smiling blithely to himself as he sketches out the design for the first prototype Memoriae, with my father, just a baby, looking on – the world, then, just a blur to him.

“As you’d expect, there’s a lot of the past here,” says my father, when he catches me looking. “There’s a bit of a cult of personality around your grandfather.”

As we walk further down the corridor, we near a twenty-something boy in a hoodie staring into a screen attached to his hand. When he looks up and sees me, he does a double-take.

“Mr. Bungard. Holy shit.” He looks at my father. “Sorry.”

“That’s okay... Sam, was it?”

“No, Jeffrey,” says the hoodie boy. “I’m a data scientist from Archival Tech. It’s an honour to... see both of you, together.”

“I’m just taking JJ for a tour. He hasn’t been here before.”

“Well, it’s a pleasure to meet you, JJ.”

I stare at Jeffrey for too long, wondering what he knows about me and my father’s past, and then I remember what I’m supposed to do. I hold out my hand

and Jeffrey grabs it and shakes it vigorously.

“What’s... that?” I ask him quietly. I point to his hand, which now glows in greens and purples.

“Oh,” he says. He looks at my father with a scrunched up expression, and I know that there must be some long-forgotten protocol around how to deal with me.

“You can tell him,” says my father. “It’s not much of a spoiler.”

“Cool,” says Sam. “It’s an, uh, embedded communicator.” He holds his hand in front of me, and I can see his skin glowing, with little tickers of information flowing along his palm lines. He rubs his flesh and a video starts playing inside his skin. “You can lose a phone, but you rarely lose a hand, you know?”

*

There’s a giant window in my father’s office, and when I look through it, I can see the entire campus sprawled out beneath us.

“Did Jeffrey... have a Memoriae?” I ask.

“Yes,” says my father. “I suspect so. The versions they’re testing are very small, now. As Autobio gets bigger, the Memoriaes get smaller – as a general rule.”

“Will he have a Watcher, later on?”

“I’m not sure, JJ. Right now, you’re still the only one doing that. Everybody else who has a Memoriae is just recording, and building up their archives. Or they’re doing real-time streaming – none of the time-shifted stuff we’ve done.”

“Why are there no other Watchers yet?” I ask, but my father doesn’t reply. I know the answer: they’re waiting for Nils to get back to them with the results of his case study.

My father gestures to his desk, full of stacks of papers and magazine articles about Autobio. It’s strange to see paper in the future. I would have thought newspapers and printed documents would be mostly obsolete by now.

“I’m the CEO, now,” my father says, though he doesn’t sound especially proud of himself. “Did you know that? It’s a spoiler, I know. I’m sorry.”

I shake my head, even though I do. I don't tell him about the obituary my mother handed me, struck through in so many places with a thick black marker, and the part at the end where the journalist noted that Autobio's stocks had plunged in the days following my grandfather's death.

"If you keep watching, you'll see how little any of this makes sense to me," he says. "Every single thing I've done has been just following step after step after step, in aid of an experiment I had no choice over to begin with. I don't even understand how I got here."

I think about my grandfather's Apple Pie, the technology that managed to predict my not-yet-father's every move just a few seconds before it happened. I guess he knew all about that now – he would know about all of the experiments my grandfather showed me on maintenance days. Perhaps Jeffrey and Autobio's other data scientists were working on a version of Apple Pie that could see much further, mapping out the contours of a life months or years in advance.

"You're lucky," I say.

"Maybe. But it's the same kind of luck that you've been saddled with."

*

We sit in my father's office for a while, until, eventually, he turns to me and says he'd like to introduce me to somebody who works for Autobio. His voice stutters as he speaks.

"It's... somebody you might recognise," he says. "But please don't try guessing."

"Okay."

Together, we walk through the campus as my father continues to point out all the different wings of Autobio. Between the buildings are the manmade ponds flanked by company deckchairs, and community gardens populated by employee-grown carrots and rutabagas, and we follow the snaking trail of an artificial river, heading in the direction of Archival Technologies.

"Jeffrey is part of the team responsible for setting up the datacenters," says my father. "There are maybe two hundred people working in Archival – lots of lives to store, now."

"Where are they?" I ask.

“The data centres?”

I nod. I often wondered what the server farms that stored my father’s past looked like. They were probably huge airless warehouses, accommodating endless lines of servers – thousands of little black boxes with flashing lights, all stacked up high to the ceiling. There was probably nothing to indicate exactly what was inside them. What did all the data comprising a human life even look like, anyway? What shape did it take?

“We have one over there,” my father says. He points to a hill, far off in the distance.

“But there’s... nothing there.”

“It’s inside the hill,” he says. “Under the ground. It’s supposed to withstand a nuclear attack. Better to be safe than sorry.”

“How many lives are... in the hill?”

“Half a billion,” says my father. “They’re backed up across the world, of course. Lots of other hills out there – I’m not even allowed to know about all of them, just in case.” He pauses. “We had a big party last month when we reached five hundred million. Now we’re trying to crack Africa and India – the goal is to have half of the planet recording everything through Memoriaes in just over a decade.”

“There will be a lot of Watchers after that,” I say.

“Yes,” says my father. “The world will probably look very different soon.”

We keep moving up the river, past Archival Tech and toward the hill, still far off on the horizon.

“Are we going to see the data centre?” I ask, but my father shakes his head.

“Even I’m not allowed in there,” he says. “But, honestly, it’s not very interesting. If you’ve seen one server, you’ve seen them all. And it’s very, very cold – they keep the temperature down to prevent the servers from overheating and starting fires.”

I think about the combined energy of half a billion lives, grinding against one another as they jostle for storage space, the friction creating enough heat to potentially set them alight.

We keep walking, until we reach a cluster of single-storey buildings. There’s an old-fashioned children’s playground beside them, with swings and slides and monkey bars, all affixed to a structure that looks like a cross between a

spaceship and a submarine. The hill casts a shadow over the play equipment.

“This is called the Playground Division,” he says. “It’s the department that works with children. I thought it might be especially interesting for you to see it.”

“Why?”

“Because... you were a child, until only recently.”

“Who works here?”

There’s a single car parked outside the cluster, and my father and I walk up to one of the buildings and stand in front of the entrance until a green light flashes and the door glides open.

The place is empty. Pinned to the walls are posters of old-timey cartoon characters and vintage ads for Lego. On shelves lining one wall of the room are dozens of simple plastic and wooden toys – cars and balls and bricks and spinners, painted imperfectly in rich primary colours.

“Dad,” I say. “Can I sit down for a second?”

My father looks at me, and I can see his face contort into concern.

“Are you okay, JJ?”

“I’m... not sure.”

The projector on my Memoriae has started flashing, warning me that my father’s past is about to return to me in a flood.

In the middle of it

Sometimes, when I was younger and my grandfather updated my Memoriae, improving the brightness or definition of the projections, he would sit me down and tell me not to move for an hour or two. Occasionally, it was too much, and I would feel a sense of vertigo – my father’s past was my world, after all, and it had suddenly changed its form. I would close my eyes and pray for the feeling to go away, and then I would open my eyes again and simply seeing the footage would make me vomit.

Now, after more than a week without the past in front of me, its return is too much for me to process. Light floods through the projector, and I take it in like a drug. I look out through my not-yet-father’s eyes, into my grandfather’s workshop, and I see my grandfather standing close, fitting the Memoriae to my father.

I try to avoid staring into the Memoriae, but I can’t help it. I find myself greedier for it than ever. Even when I close my eyes, I can hear the past piping through my earbuds.

“I fucking hate you,” mutters my not-yet-father. “I want you to know that I don’t want this. I don’t want to be your lab rat anymore.”

“Jay,” says my grandfather. “This is the only way. I’m glad you’ve come around.”

“I haven’t ‘come around’. I just... don’t know what else I’m supposed to do.”

“But you understand now, don’t you?”

My not-yet-father begins breathing huge gulps of air, fighting the urge to cry, as my grandfather stands in front of him and smiles sadly.

In the present, I can hear my father calling my name, but it’s hard to make out through the din of the past.

“I need to stay here,” I want to tell him. “I need to be twenty-eight years ago.” But I don’t say anything. I can’t.

“JJ? Stay right there, okay? I’m going to get some help.”

I knew that these episodes were at the heart of Nils’ case study. He never told me for sure, but I knew this was what made me the perfect subject for him.

*

I'm in the middle of it, now. I've learnt to trace the contours of my episodes, understanding how past and present can come unstuck. That doesn't mean I can control them, though – all I can do is ride them out.

I hear a voice, but I can't tell where it's coming from. Where am I? It's hard to tell. For a few seconds, or minutes, or hours, I'm stuck in limbo, inside the impossible, gossamer space between my father's past and my own present. I remember that, when I was in control, it used to be so straightforward: a simple flick of the eye and I'd be back. But it's not easy now that I've forgotten which is which, when is when, and where is where.

I know this is purely psychological, and that all I need to do is shift my gaze away from the light coming at me from the Memoriae, and pull the earbuds out, but that's easier said than done. It's like waking from a dream, or falling into one: the process is just as uncomplicated as it is inconceivable. Over the space of a week, I've forgotten entirely how to flick the Memoriae's projector from my eye, and how to disengage from this other man's past. And all this time, I hear a voice, drifting, coming from a space interior and exterior, from a time both now and then.

The voice is asking whether I'm okay, and I don't know what to say.

Really, I don't know if I can say anything at all.

How can I ever be sure that anything isn't a hallucination? That *everything* isn't a hallucination? Once, Nils gave me an essay by George Berkeley, who suggested that we can't be sure a world outside our heads actually exists. The best argument against his thesis was that, when you stub your toe on a rock, it usually hurts. I told Nils that I thought that was a pretty weak defence of the entirety of objective reality.

I'm still swirling.

"JJ," says the voice. It's a voice I remember, or is it a voice my *father* remembers? I can place it, the voice – I can attach this voice to a memory, almost.

"Dad?"

The entity laughs. "Cold."

"Grandpa?"

“Do I really sound like your grandfather?”

I feel an arm on mine. A hand flicks the Memoriae away from my eye.

“Hello, JJ.”

A face appears, blurry at first. A middle-aged woman’s face: pale, friendly, possibly a hallucination. I’m staring, dribbling, half-comatose.

“Ann-Rita?”

“JJ, there are some toys here,” the woman says. “I know it’s silly, but see if you can focus on them. It’ll give you something concrete to direct your attention towards.”

Then, the woman disappears, though maybe she hasn’t gone far – everything beyond my arm’s length is a blur. All I can see is a bright red toy truck and a couple of dozen Lego blocks. I pick the truck up, then start rolling it gingerly across the carpet.

Then, suddenly, everything goes sloppy again, until the woman taps me on the shoulder and places a glass of water beside one of the blocks. I stop rolling the red toy truck and take a sip. I bring the glass up to my mouth with both hands, then tip it in the general direction of my mouth. I am at least half-successful.

“Where’s my dad?”

“He’s gone off to find the psych team. He’ll be back soon.” The woman snaps her fingers a few times in front of her face, watching for my reaction. “You’re going to be okay,” she says. “You had a bad reaction to the footage coming back. You were just overwhelmed. You’re probably not used to having to context-switch like this anymore.”

I don’t respond for a moment, then another moment, then another. I realise I’m not going to respond. I can’t. My tongue won’t move.

“Take another drink of your water.”

I have another sip. The water feels cool. It reminds me of taking cold showers during heatwaves in summer. It reminds me of the day we took the train out from Union Station to Disneyland because Dad didn’t want to drive in LA. I’m moving my hand across the train cabin’s window, feeling where some older kid has scratched a line into the glass with a key. And now we’re *at* Disneyland, and we don’t even have to wait in line because I guess nobody else wants to do Disneyland on a wet and unhappy weekday morning. I bruise my elbow getting into the log for Splash Mountain. A little girl in a blue dress spills chocolate chip

icecream on my sweater. It reminds me of playing soccer in the grand final game, in the middle of a downpour, mud flecking my boots as I run.

“Oh, dear,” I hear. “JJ, I *really* need you to think. Try and tell me what you think is happening – where do you think you are?”

“Darling, I’m just a girl who knows for sure that she doesn’t have a clue who she is,” I say, channeling my best Katherine Hepburn.

“Hmm. Okay. Maybe take another sip of water and wait a moment, then try again.”

So I do – and I try.

“It’s the twenty-fourth of October, 2008. I’m sitting on a bench by a tennis court and my mother is explaining to me that Siegfried is dead. My mother puts her arm around me and I lean forward and cry. Two girls continue playing tennis in front of us and they’re volleying and serving and I want to scream, ‘Don’t you care at all about Siegfried?!’”

“Who’s Siegfried?”

“Siegfried was a dog. A Pomeranian husky.”

“Was he *your* dog, or your father’s?”

I try to focus on the woman’s voice, at once familiar and not. It’s the only thing that’s keeping me in the room, that’s stopping me from just floating back to that sleepy, funny in-between place.

“Okay, JJ! Focus! Look over here.”

But I can’t. I lie down beside the red wooden truck and rest my head on my little Lego city and soon I’m back in-between. I have a dream in which I’m walking through door after door after door. It starts out pleasant enough but soon I’ve walked through a hundred doors, then a thousand, and then I don’t think I want to walk through any more.

When I wake, my father is sitting beside me, sweeping the Lego blocks into a pile. He stands up and places the red wooden truck on the shelf, next to its brethren.

“JJ,” he says. “That was bad. I’m so sorry that just happened to you. I went to try to find the psych team but they were all out for lunch and –”

“I think I’m alright now.”

My father pauses, and rearranges the toy truck.

“Okay. That’s good,” he says. “Please don’t tell Nils about any of that.”

He'll have a field day.”

“I won't,” I say. “I promise.”

I know, though, that Nils already has more than enough material for a chapter or two on psychosis. Once, he had asked me to try to remember my relationship with the world when I was very young. I struggled to articulate it, but he pushed me further, teasing out my inability to separate myself from my not-yet-father.

“That's very interesting,” he told me, eventually, but he didn't tell me what ‘interesting’ meant.

Theseus' Paradox

My father and I sit on the ground together, in the building with the Lego and the plastic toys.

“Do you want me to take you to the medical department?” my father asks.

“No,” I say. “I’m okay. This has... happened to me before.”

My father nods.

“Do you remember where we are? We’re in the Playground Division, at Autobio. This is the group that work with children... sort of the way your grandfather worked with us.”

“I remember.”

I’ve swung the past entirely out of view, even though I badly want to see it.

“Good,” my father says. “And do you remember me saying that there was somebody I wanted to introduce you to?”

I turn my head and follow my father’s gaze. A woman is sitting with her back to us on the other side of the large room, wearing a headset and kneading and sculpting the air with augmented reality gloves. I can see her thin brown hair and the pale white skin of her elbows. She sits with perfect posture.

“Is that the lady who helped me?”

He looks at me and chews his lip.

“Yes,” he says. “That’s... Ann-Rita, actually. She runs the Playground Division.”

My father keeps darting his eyes away from me and back again, searching for clues in my expression. Because we never speak about my access to his past, everything I know about him is a secret we both pretend not to share. I give him nothing.

“I thought you might like to meet somebody familiar,” my father says. “I know you don’t know many people in the present, and I told Ann-Rita you were coming and she said she was excited to meet you and –”

I crumple up my face.

“I know,” he says. “Spoilers. I’m sorry. Maybe this wasn’t a very good idea. Maybe we should go back.”

I sit and watch my father as he looks across the room at Ann-Rita, working

at her desk, and I try to remember the last time I saw her in the past. They were both in her bed, and he was asleep, and she had whispered “I love you” into the Memoriae so quietly that only I could hear it, twenty-eight years down the line.

“She has a son who’s about your age,” my father says. “His name is Charlie. We discussed the idea that, maybe, you could meet him one day – just so you could spend some time with somebody who wasn’t in the past.”

“Does he know about me?”

“Yes,” says my father. “He does. He’s a nice kid.”

“And... does he know that you recorded his mother?”

“Yes, JJ. He knows about that, too. He knows about all of that stuff.”

I think about Ann-Rita’s son, both of us born around the same time, but into different timelines. To him, it would probably be inconceivable to imagine his mother young. He would never have had to learn to carry around multiple versions of her – there would be no ‘not-yet-mother’, because that person would have disappeared at the very moment he was born. Ann-Rita, too, would never need to worry about her old, outdated self manifesting before her son. Their family life would be so simple and old-fashioned, entirely un-timeshifted and un-augmented.

This wasn’t the case for my mother, of course. She carried the burden of knowing not only that she had been recorded, but that her child would eventually view every last second of the footage. I think about her pacing up and down the corridor outside my fortress. She didn’t do that last night. I couldn’t hear her in the house at all.

“Hey, Dad,” I say, eventually. “Why wasn’t Mum home last night? Has she gone on holiday?”

My father pauses.

“No,” he says, slowly. “She hasn’t gone on holiday. She was out last night – she must have come home after you went to sleep.”

“Where was she this morning?”

“I’m not sure. She must have already left for work.”

“Oh,” I say. “But... why have you been fighting?”

“We haven’t been fighting,” my father says.

“You have – I can hear you. Through the walls.”

My father slides himself towards me, then leans in close.

“It’s complicated, JJ. Do we need to talk about this here?”

I try to think back to the day the arguments started. I think about when my mother asked me whether my not-yet-father had a girlfriend, and about the faint lines of concern that had appeared on her face when I’d said, “Yes.” Then, she’d asked me for her name, and I’d said, “Ann-Rita.” The fighting had begun just after that, my parents’ shouted words indecipherable to me as the sound passed, muffled, through the walls to my fortress.

“I guess... the past still has a habit of sneaking up on both of us,” my father says. “Your mother still finds it hard to wrap her head around the recordings, especially now that she’s making an appearance in them, too – there are a lot of memories from back then that your mother probably doesn’t want to be reminded of, even in the middle of a lot of nice ones. We were teenagers who did stupid things, and now we’re not.”

I wonder if my father knows where exactly I’m up to – whether he has a calendar where he keeps tabs on the past, marking out the day he remembers first meeting my mother, or the days he remembers cheating on her with Ann-Rita.

Perhaps there was something comforting about the past receding. I think about the couple in the black-and-white photograph – the picture that had been hidden away for decades at my father’s childhood home. Now, all that remained were both of them forever smiling in their Sunday best. They would have had more photographs, of course, whole albums of them that were now probably lost in the attics of their children’s children’s children. Were those albums to be recovered, their life would appear to their descendants purely as a collection of Kodak moments – all holidays and weddings and reunions and baby showers. Their life together would seem an entirely wholesome one, and it would be impossible to determine whether the image that emerged was idealised or real because all of the links to the past had come untethered. When the truth was no longer accessible, only the pictures remained, and the bad bits would never have been recorded, just deliberately left to slip from memory. There would have been tears and betrayals, but the camera would never have come out then.

The Memoriae was different. It recorded everything. The bad parts never went away.

When I look at my father, he gives me puppy dog eyes, but I’m not sure why.

Even as we sit close together, I can feel the expanse of time between us. I think of all of the things that must have happened over the past twenty-eight years, and all of the strains in my parents' relationship – just spoilers to me, things I'd always tried my hardest to avoid.

"I haven't always been fair to your mother," he whispers, glancing behind him to make sure Ann-Rita can't hear. "That's true. Over time, you'll see that. So perhaps my chickens are simply coming home to roost."

I don't understand what he's talking about, but I know that doesn't really matter to him. My father isn't really talking to me in the present – he's apologising in advance to me in the future, for all of the things I'll one day see. He's telling me that he's not going to become the better person that I hoped he would.

"It's okay," I say. "You know, Theseus' Paradox."

Focus group

When my father introduces me to Ann-Rita, she laughs nervously.

“Oh, no need for introductions, Jay,” she says. “You know, JJ and I met earlier.” Her hands are shaking, and I realise this is a moment she’s been thinking about for years – the day she’d eventually meet the boy who could see her in the past, and who had watched as her seventeen-year-old boss broke her seventeen-year-old heart.

I have thought of this moment, too. On my laptop, I’d saved the letter I wrote to Ann-Rita, apologising for my not-yet-father treating her so poorly. I’d thought, in a very half-hearted way, about trying to find her address and mailing it to her, or of arriving at her doorstep with the letter in my hand. I’d thought that she would never have seen my father again, after she realised he had met somebody else. I imagined her as existing far away, now in another world entirely. That was the only way it seemed possible for me to conceptualise the relationship between past and present, with everything splitting away in space as well as time. It seemed so hard to imagine all of the characters from my father’s childhood simply existing in the same city so many years later, maybe only kilometres away from my father, even if they’d never crossed paths for decades. Still, I guessed this was how life worked, with the specters of the past endlessly boomeranging back.

“Hi,” I say.

Ann-Rita and my father exchange glances, but it’s difficult for me to understand what they’re thinking. This is an impossible conversation – there is too much that must remain unsaid, too many spoilers and old memories, and I know that neither of them want me to say anything at all.

“So, it must be strange to see me now compared to when I was just a little girl,” says Ann-Rita, eventually.

“Yeah,” I say. “You aren’t a little girl, though. You’re my age.”

“That’s true. That’s right. Did Jay tell you about Charlie?”

I nod.

“He’s seventeen, now, too. Time marches on, I suppose.” Ann-Rita raps her fingers on her dress.

“Ann-Rita used to be a teacher,” my father says, brightly. “For... how many years was it?”

“Maybe five years. Not long. Then I took a course in industrial design.”

I can tell that my father is giving Ann-Rita the opportunity to underscore the time that has passed, creating a gulf between the version of her that I hold in my head and the version that stands before me, a gulf she can fill in with all the versions of her that have existed in between.

“Do you still go to church?” I ask.

Ann-Rita winces.

“Um, no, I don’t, JJ. Actually, I stopped going to church a very long time ago.”

“Why?”

I can tell that I’m making things uncomfortable. Ann-Rita looks at my father, as though hoping for him to rescue her from me, but he just looks out at the carpark that is slowly filling with sedans and station wagons.

“A lot of things happened, I suppose. I decided that it wasn’t really for me. It was something that meant a lot to my parents, but when I grew older, it began to make less sense to me.”

“Did Dad ever come to church with you?”

Ann-Rita squints, as though trying her hardest to recall.

“I don’t think so, no.”

“I remember that you asked him to. I saw it, a few weeks ago.”

“Oh?”

I can see Ann-Rita tensing up. She pats the side of her dress, looking for pockets to slip her hands into, but there aren’t any, so she grips the fabric tightly.

“Well, that was a long time ago – for me, at least. It’s hard for me to remember a lot of things from back then. But... that’s why we have the Memoriaes.”

My father coughs, and when Ann-Rita looks his way, he points over to the carpark.

“Maybe we should get going,” he says.

“Maybe,” says Ann-Rita. “But you don’t have to. Perhaps JJ would like to see what I do.”

*

My father and I stand out the front of the Playground Division and direct the children to bound around the play equipment while Ann-Rita finishes setting up inside. Some of their parents stand on the outskirts, glancing at their watches, while others nod at my father, who gives them a thumbs up, and proceed to hop back in their cars and drive away.

I wander off a little, down the path, looking at the installation art. As we walked through the campus earlier in the day, I noticed that it was scattered with sculptures of antique cameras – Kodak Brownies and Pentax SLRs and Super-8 video recorders, all of them blown up to ridiculous sizes and rendered in garishly coloured plastics. Now, I walk up to inspect a gigantic hot pink Polaroid camera.

“Hey-hey-hey-hey!” says a small boy, walking up the path toward me. He gives his mother’s skirt a series of urgent tugs. “Look, mum! That boy like me.”

The boy gives the Memoriae on his head a little tap. It’s one of the Teenage Mutant Ninja Turtles models I saw in the catalogue in Nils’ clinic. I don’t know the colours, but I give it a go. “Donatello?” I ask, quietly.

“Nope!” says the boy. “Red is Raphael!”

“Oh. My apologies, Raphael.”

“I’m so sorry!” says the mother, giving my father and me a little wave. Then she turns to her son and growls, “Jonathan – what have I told you about shouting at strangers?”

“Is... rude,” he mumbles.

They’re heading for the focus group, and I point them up the path, toward my father, who stands by the entrance to the Playground Division.

“Mummy says I special,” whispers the boy to me. His shirt is dirty, with a whole constellation of stains just below the collar. “Are you special too?”

I touch my Memoriae and it makes a metallic twang.

“Yes,” I say. “I guess I am.”

“Mummy says one day people will watch me. So they see this! They see...”
The boy spreads his arms out wide and starts running around in tiny circles.
“Hello, people! You think people will like to see this?”

Someday this kid will be *his* child’s not-yet-father, I realise – and his child will be a Watcher, just like me.

“I’m sure they will,” I say. “You’re making a very good recording.”

I look out at the carpark, now full of station wagons with their rear windows plastered with galaxies of wholesome bumper stickers. Ann-Rita swings the doors to the Playground Division open, and the children begin flooding in.

*

Back inside the Playground Division, there are now a multitude of tiny hands pushing the small wooden cars across the floor, and tiny fists slamming down on the miniature plastic block cities, resulting in screams and tears and giggles. Two small girls hold onto opposite ends of a slinky and run around the room, unraveling the metal wire and snagging it on chairs and legs.

I watch as Ann-Rita stands in front of them and pulls out a tiny, bright blue ball from her handbag. It looks like it’s made of foam rubber, like a stress ball, and as she places the squishy sphere in the centre of her palm and begins squeezing in short bursts, all of the children stop the havoc they’re wreaking and stare at Ann-Rita, like a pack of wild dogs stunned by a high-pitched whistle. Then they laugh – every single child, in unison.

All of the children are wearing their own Memoriaes. Some have Teenage Mutant Ninja Turtles models, and I can see the boy I met outside looking at those kids and scowling. Others are wearing the diamanté ‘princess’ Memoriaes, but most just have smaller, more refined versions of my basic brushed-metal model.

The mass of children splits into two smaller groups. Ann-Rita lets me join the focus group she’s leading, while a girl with a dangling Autobio lanyard takes the other. My father stands at the back of the room and grins at me.

“Okay, guys,” Ann-Rita says, once her group of children have gathered around a table covered in crayons and coloured paper and pieces of macaroni and pipe cleaners and safety scissors. “To start, I want you to use all of the stuff on this table to make a portrait of the person standing next to you: you make them, and they make you. The only rule is that there *are* no rules. Actually, there is *one* other rule, which is that you’ve got five minutes, starting... *now*.”

There’s a mad scramble as kids lunge for their craft objects of choice. The pipe cleaners go first, then the coloured paper, then the crayons. Some of the children that get to the table late begrudgingly scoop handfuls of macaroni from

the table.

“I never understand why nobody likes the macaroni,” says Ann-Rita.

I smile, and I can see, for a moment, an earlier version of Ann-Rita, twenty or more years earlier, emerging from university with her teaching degree, finally certain – or almost certain – of her place in the world.

Then, I watch as the children start making one another out of smudgy crayon and pasta.

“The idea is to get an idea of how much the Memoriae plays into how children see one another,” Ann-Rita explains to me in a whisper, expertly snatching a pair of scissors out of the hands of a running child. She points at one of the creations.

The boy I met outside is creating the likeness of his partner, a kid with big teeth, a shock of red hair and a generous smattering of freckles. When I look at the portrait that’s coming together, though, I can see that the boy from outside has spent almost the entire time focused on the other child’s brushed metal Memoriae: he’s cut out a dedicated piece of shiny silver paper for it, and drawn in all the details, and the rest of the boy’s face is just a yellow circle with a couple of crayon lines for hair and a mouth.

“When a child makes a drawing like this,” says Ann-Rita, “it suggests that they see their own Memoriae as playing a big part in their own self-definition. It’s a kind of projection – when people ascribe things about themselves to other people.”

After the five minutes is up, Ann-Rita and I walk around the table and take a quick look at all the portraits. The size and prominence of the Memoriae differs wildly between the representations. In some of the portraits, there’s no Memoriae depicted at all.

“Is this portrait thing a test?” I ask, slightly more quietly. I think of Nils’ questionnaires, and how similar they are – I’m just like these children, only more than a decade down the line.

“No,” says Ann-Rita. “It’s not really a test – it’s all about trying to understand how people work, and there’s no right way or wrong way to be.”

She walks a few metres away from the craft table and gestures for me to follow.

“For example,” she says, “girls are, as a rule, less likely to see their

Memoriae as central to their self-concept. Boys, on the other hand, will often depict their partner as a kind of cyborg, giving them robotic arms and legs.”

I stare at my non-robotic arms and legs and wonder how somebody might draw me. If I were to have drawn myself a few weeks ago, I think, perhaps there would have been nothing there – just the faintest outlines of a ghostly apparition.

*

While the children finish their projects, I tune into my father’s past. I don’t flick the projector down, just in case I’m overwhelmed again. Instead, I just put one earbud in and listen to the sounds of twenty-eight years ago.

My not-yet-father, I can tell, is sitting in the park, passing around a joint with a group of the kids from his year who dropped out of school.

“You don’t need to go back, Jay!” one of them says. “When school starts again, you can just say, ‘Fuck it!’ Nobody can make you anymore.”

“I might,” says my not-yet-father. I imagine him holding the joint with the roach between his thumb and forefinger, then drawing it to his lip and taking the tiniest possible drag.

“It’d be a ‘fuck you’ to your dad, especially,” says one of the kids.

“Yeah, that’s true.”

The kids keep talking, trading stories about waiting on the phone for Centrelink, and all of the crappy jobs they’ve been forced to take to get them through the summer.

“I’ll be back in a second,” my father says, after a while, though I can tell that nobody is paying him any attention.

I hear my not-yet-father walking, the soggy sound of boots on wet grass. One of the kids is talking about stacking boxes, and the others are laughing, but it slowly fades out to nothing as my not-yet-father gets further and further away.

“Ann-Rita,” I hear. “Hi.”

“You didn’t get my messages?” says Ann-Rita, in the past. In the present, I can hear her, too, both voices overlaying one another in a supernatural stereo.

“I’ve had a shit week,” he says. “I’m sorry. I’ve been in bed for days.”

“Bullshit!” says Ann-Rita. Her voice quivers. I’ve never heard her swear before.

I flip the Memoriae's projector down and watch as Ann-Rita leans toward my not-yet-father and makes a grab for his back pocket, so unexpectedly that my not-yet-father doesn't even move. When she pulls back, she's holding my father's phone tight in both hands, like a tiny trophy.

My not-yet-father just shakes his head while Ann-Rita scrolls through his messages.

"Who's 'Felicity'?" she says.

"I don't know. Nobody."

Ann-Rita throws the phone down so hard it leaves a divot in the grass. Then she turns, and I can hear her sneakers squelching as she walks away from my not-yet-father.

In the present, I sense that Ann-Rita – this other, later version of her – is watching me.

"How are you going, JJ?" she asks. "Are you okay? We're moving on to the next activity now."

Secret messages

It's late in the evening by the time my father and I leave the Playground Division, and the hill with the data centre buried beneath it no longer casts a shadow. In fact, it's hard to make it out at all against the sky, so overcast and dark that no stars spill their light. I think of 61 Virginis b, the super-Earth twenty-eight light years away. If the 61 Virginisians had their telescope pointed at us right now, the clouds would hide us from them.

We walk back past the oversized camera sculptures, now lit up by little LED lights, and toward the old mansion where my father's office looks over the entire campus.

"Dad...", I say.

"Yeah?"

"Why did you bring me here?"

My father stops walking, and I see his silhouette against a giant yellow plastic model of one of the old versions of the Memoriae.

"I wanted to show you how big this whole thing is, now," he says. "I wanted to get your take on all of it."

My father has one hand by his side, gripped tight, and I can see his muscles tensing.

"Do you not think the Memoriae is a good idea anymore?" I ask.

"I'm not sure, JJ. I know what you're watching now, and it's not the only time I tried to bow out of your grandfather's experiment. Once, I remember he said to me, 'This is the future, and it's going to happen, so we might as well be the ones to do it right.' That seemed like such a strange way of thinking – as though the Memoriae was just an inevitability. But, the thing is, maybe it was. Perhaps it was like the light bulb or the radio – something that couldn't have *not* come into existence."

"Do you... think Grandpa did it right, though?"

"I'm not sure," my father says. "I have a different view. Even though I think some things are inevitable, I think... maybe sometimes we need to fight back. I'm not sure people *need* to record everything, even though that's what they say they need, now that we've shown the Memoriae to them. Your grandfather

saw a trend of people documenting more and more of their lives, and he could see that if he offered a way to document even *more* of themselves, people would flock to it. But sometimes people don't understand that more of the same isn't always better. Sometimes they need to reassess why they think they want what they want."

My father speaks slowly, and I can tell he hasn't allowed himself to think these thoughts in a very long time.

"When you were born," he says, "it made some kind of sense to have you watch my recordings – after all, I'd already been creating them for twenty-eight years. It's what I now know is called the 'fallacy of sunk costs'. I was always too far into your grandfather's experiment to work out how to get myself out of it. And then he let me rope you in, too. And now, there's no way to wrap any of this up – the board of directors would kill me if we stopped manufacturing Memoriaes."

"Why did you take me to meet Ann-Rita?"

My father exhales.

"I've worked with Ann for years," he says. "And we both dreaded the idea of your first introduction to her being what happened when I was young and stupid. She'd wanted to meet you for a long time, but... obviously that wasn't really possible."

"Spoilers," I say, half-smiling.

"Yeah, spoilers."

I keep watching my father as we walk, and that's when I notice it: my father is holding the same kind of stress ball Ann-Rita squeezed in front of the children to make them go quiet, this one in baby blue.

"You can have one, if you'd like," my father says.

"One of what?"

"One of these." My father pulls another stress ball from his suit pocket, this one the fluorescent green of a radioactive lime.

"They're called Squeezers," he says. "Ann-Rita's team has been working on them, actually. Do you want me to show you how they work?"

"Okay."

My father brings one of his hands toward my face and pushes down on a recessed button near where my Memoriae meets my ear. Then, as he begins to

squeeze the lime green ball, I feel a gentle jolt run through my skull – as though somebody is flicking the side of my head with a fingernail.

“There’s a vibrating motor in your Memoriae,” he says, “and whenever I squeeze this little thing, it makes it buzz. It’s pretty simple, in many ways. When you pair a Squeezer to a Memoriae, it turns it into a channel for one-to-one communication. Right now, I’m squeezing you a secret message.”

I don’t tell my father that a secret message only really counts as a secret message if the intended recipient knows how to interpret it. Otherwise, it’s just a jumble of letters, or, in this case, an indecipherable head message.

“What are you squeezing?”

My father smiles.

“If I told you the message, it would defeat the purpose of squeezing it to you. It’s in Morse Code.”

“Well, that’s not very helpful.”

He laughs, then throws me the green ball, and as I squish it between my fingers, my head throbs accordingly. It feels very Zen: *I am the ball; the ball is I.*

My father tells me that when Ann-Rita arrived at Autobio, she came up with the Squeezer as her first side project. I’d already seen some of the other side projects created by other Autobio members, in the ‘beta features’ section of my own Memoriae: a game of Breakout you play by darting your eyes from side-to-side, and an augmented reality system that morphed everybody in my not-yet-father’s life into different Looney Tunes and Disney characters.

“Before she came to Autobio, Ann-Rita actually designed playgrounds,” says my father. “She designed the one right next to the Playground Division building. It’s very interesting, actually. She was most fascinated by the idea of emergent properties – basically, finding out all the different and unexpected ways kids would end up playing with the equipment that she created. So, when she came here, the first thing she wanted to try was to create something for children that had a really basic mechanic, but nothing that really dictated how or why it should be used – so they could figure out how to use it themselves.”

“It’s like a telegraph machine,” I say.

“Sort of,” says my father. “It’s quite similar to a telegraph transmitter. The idea is that you pair one ball to a Memoriae, and when you squeeze, it triggers a

switch that sends a corresponding buzz to your partner. So kids could have, say, five squeeze balls in different colours, each connected to a different friend.”

I think of my not-yet-father learning braille, and the world of touch that existed outside my grandfather’s control.

“But... if you use the Squeezers, it means that nobody else can see what you’re saying. It means that the Memoriae can’t see it either.”

My father nods.

“That’s right,” he says. “As much as anything, it’s a way to hide from the recordings. We create the surveillance system, and then we provide those who are watched with the ability to subvert it.”

“Did you ever learn to properly read in braille?” I ask.

“Sort of, but I never got very good at it.” My father stops and points to his eyes, his left one partially obscured by his Memoriae. “I got them fixed, properly, many years ago. I went to a doctor as soon as the procedure was available. That was when I stopped becoming dependent on your grandfather – less dependent, at least.”

I take another look at the baby blue Squeezer that’s still in my father’s hand. He’s stopped gripping it tightly; now, he lets it roll around in his fingers.

“So, who is that one paired to?”

My father stops. We’ve arrived back at the mansion.

“Oh,” he says. “That one’s paired to Ann-Rita. She’s testing it out with me.”

Spray painting

It's very late by the time my father and I get home, and my mother is standing by the front door. The house is dark – all of the lights are turned off.

“So,” she says, “what did you get up to today, JJ?”

I notice that she only looks at me when she speaks.

“I showed him around Autobio,” says my father flatly.

“And what did you think, JJ?”

I take a look from one of my parents to the other. My mother, at the top of the stairs, has her arms folded in front of her, and her eyes flick from me toward my father's jacket pocket, where I can see the outline of his baby blue Squeezer.

“It's... much bigger than when I went to see it last time,” I say.

“I took him to see one of the focus groups.”

My mother glares at my father.

“Oh, did you?”

My father's shoulders slump.

“Felicity, come on. Let's just focus on one thing at a time.”

“No,” she says. “No. JJ, I'm really sorry, but... there are going to be times when it's just not possible to avoid spoilers.”

When I glance at the doorway, I can see three suitcases behind my mother, all stacked on top of each other.

*

“Don't worry, JJ – she's just gone to a motel.”

My father sits with me at the dining room table, in the same chair he sat on when we had roast chicken for dinner on the day I didn't remember was my birthday.

“Are you getting a divorce?”

“I know that I keep saying this, JJ, but... it's complicated.”

When my father gets up to make us dinner, he opens the pantry and it's almost empty. I wonder whether, in the middle of their fighting, my parents both forgot to schedule their regular Amazon drone deliveries.

“It doesn’t have anything to do with you, JJ. I just want you to know that.”

Perhaps that’s true, but maybe it isn’t. My parents’ fighting would often start straight after my mother saw me – but it happened on so many other occasions, too, that perhaps that was just coincidence.

“Is it because of Ann-Rita?”

My father pulls two little boxes of frozen curry from the freezer.

“Not exactly.”

He takes the little containers out of the packaging and peels off the film.

“Twenty-eight years is an extremely long time, JJ. A lot has happened between your mum and I. We tried so hard to make it perfect, for the recording, for you – when we were a few years in, we recognised that this would be the first comprehensively recorded account of a marriage in history. Or, one side of it, at least.”

The microwave begins whirring, and I watch our dinners spin.

“You’re only just at the beginning, though. And I know you don’t want spoilers. But like your mother said, I guess there are some things that we couldn’t keep hiding for another few decades.”

As my father pours the steaming curries into two separate bowls, I gaze into the past.

“What’s happening?” my father says. It’s the first time he’s ever asked me about the past.

“You’re... standing on that big bridge in Northcote,” I say. “The one that overlooks the city.”

“Is your mother there?”

“Yes. You’re apologising to her for not being able to see her... and she’s telling you that it’s okay.”

“Oh, yes,” my father says, tapping his head. “I remember that, now. It’s strange how many things you forget that are still in there somewhere.”

I keep looking through the Memoriae as we eat. Earlier in the day, after my not-yet-father came home from the park, I watched him print out old Situationist slogans on my grandfather’s printer, cut the words out with a scalpel, then stuff the stencils into his backpack. Now, standing on the bridge, as they both look out at the city lights, my not-yet-father pulls them out again.

“Hey,” he says. “Remember those messages you stuffed in the clothes at the shopping centre?”

“Oh, yeah?”

“I made some more. I thought you might want to do some... culture jamming.”

“Really?”

“Yeah.”

My not-yet-father holds my not-yet-mother’s hand as they walk to Westgarth Station, scramble onto the train tracks, then walk along them until they find a brick wall half-filled with illicit scribbling. From his backpack, my not-yet-father pulls out three aerosol paint cans and a can of spray-on glue.

“I haven’t done this before,” he says.

“Me neither,” says my not-yet-mother. “I normally just make placards for protests and stuff. I haven’t done the whole ‘wanton property damage’ thing before.”

“Oh, I thought you’d be able to show me how it was done,” says my not-yet-father. “I guess we just... use the adhesive to stick the stencil on the wall, and then we spray the paint over it?”

“Yeah, I think so.”

My not-yet-mother is wearing jeans and a t-shirt, and as a gust of wind passes down the tracks, I can see her shaking, just a little. My not-yet-father looks around, staring down the tracks in one direction, then the other.

“Oh, shit. I think I see someone,” he says.

“Really?”

My not-yet-father points at something a hundred metres down the line, and quickly throws his backpack against the wall.

“That’s a bloody shrub!” my not-yet-mother shouts, then they both start laughing.

My not-yet-father checks the time and consults the timetable. They stand by the side of the tracks, in the darkness, waiting for a train to clatter down the line, then my not-yet-father holds a stencil with the words ‘Boredom is Counterrevolutionary’ to the wall while my not-yet-mother sprays over it in bright pink. They repeat the process with all the other stencils – ‘Fall in love, not in line’ in navy blue, ‘Live without dead time’ in mustard yellow.

“There’s one other stencil,” my not-yet-father says. “This one’s kind of stupid, though.”

“Let’s see.”

My not-yet-father pulls a final piece of paper from his backpack, with a message in tiny block letters: ‘LB LIVED’.

“What does that mean?” my not-yet-mother asks. “Who is ‘LB’?”

“It’s hard to explain. It’s just a... personal message.”

“Very mysterious,” says my not-yet-mother. “Okay, well, we should probably put this one somewhere nobody will ever find it, right? That way, when all of this is buffed off the wall, this will stay.”

I look away from the Memoriae, and into the present. My father stands by the kitchen sink, rinsing our bowls and loading them into the dishwasher. When I flick my eye up into the past, I can see my not-yet-father spraying the secret message over the top of the misty lines of decade-old swear words and territorial tags.

“Is it still there?” I ask.

My father turns from the sink and looks at me over the empty bench.

“The stencils?” he says, knowing, without prompting, exactly what I’m talking about. “I’m not sure, actually. I’d be surprised. That building has probably been knocked down.”

“Is LB the girl in the photograph?”

“Yes,” says my father.

Eden

In the morning, as soon as I woke, I opened the door to my memory fortress. The house was silent, and I could tell that my mother hadn't returned. I walked down the stairs into the kitchen and could see my father at the breakfast table, with the baby blue Squeezer – his secret point of contact with Ann-Rita – perched in front of his bowl.

“Good morning,” he said. “Would you like some?” My father held up a spoonful of soggy, milky Weet-Bix mush, and I shook my head.

“I've already had my food substitute.”

“Of course. It probably tastes better than this, anyway.”

My father told me he'd taken the day off work, because he wanted to keep his end of the bargain. He wanted to tell me about LB, the girl in the picture.

“We're getting well into spoiler territory,” he told me, but I said it didn't really matter anymore. With Mum leaving my father, and my father squeezing messages to Ann-Rita through a stress ball, I knew that it wasn't going to be easy for me to keep the present at bay. I needed to start figuring things out for myself, instead of waiting twenty-eight years for the present to come to me.

*

Now we're in my father's self-driving car, heading up the coast. Through my Memoriae, I record the blur of road and sand and sea and sky: four solid horizontal blocks of colour that will compress down easily when the video footage reaches the server farm hidden in the hill at the Autobio campus. I sit next to my father up the front, and he plays old Fleetwood Mac songs through the car stereo.

“Where are we going?” I ask him.

“Eden,” he says.

“Very funny,” I tell him, but he's serious.

“It's a town on the coast, just across the border.”

“They should build a Beginning-of-The-World Theme Park there. Tamed snakes, toffee apples, a Noah's Ark simulation ride.”

“I don’t really think it’s that kind of place,” my father says.

“Is LB there?”

My father doesn’t reply.

While the car drives itself, my father looks out the window. I do, too, but occasionally I drift into the past. My dad is back at school now, and has a new physics teacher called Mr. Potts. Every time Mr. Potts turns around, my not-yet-father and his friends hold their thumbs to their mouths and breathe in as though they’re getting high. I spot Ann-Rita sitting at the front of the classroom, but she never turns around, so I try to focus on what Mr. Potts is saying, even though my not-yet-father isn’t paying attention.

It’s a refresher class on the concept of momentum.

“A body in motion stays in motion unless acted upon by an outside force.” Mr. Potts is fond of using diagrams showing the interaction between billiard balls to demonstrate Newton’s theories. “Every action has an equal and opposite reaction.”

I can’t help but feel Mr. Potts would have a better time if he used more practical examples. Instead of showing one billiard ball smacking into another, maybe he could use the example of somebody trying to love somebody else, with one person pushing against the other and the two both accelerating apart.

“Hey, Dad, what’s Newton’s Third Law?” I ask, giving my father an impromptu pop quiz.

“I think it has something to do with Slinkies,” he says.

If he had been paying attention twenty-eight years ago, my father would be able to answer me properly.

*

When we arrive at a little town called Sale, we find a park bench to eat lunch. I try to ask my father about LB, but he doesn’t want to say anything until we get to Eden. I can feel meat pie and chocolate milk sloshing around in my stomach as we walk back to the car, but I don’t tell my father. I don’t want him to remember that I’m not used to food, and even less used to travelling through the world of the present.

I try to imagine what Eden will look like, with skies full of rainbows and mountains stretching into the clouds. Then, in the front seat, I gradually find myself nodding off, my skin warmed by an unfamiliar sun.

It's late afternoon when I wake, and I look over at my father and see him snoring in the driver's seat, while the car winds its way neatly around a cliff face. Were my dad to wake up, I wonder whether he'd immediately begin anxiously monitoring the car, convinced we were one programming fault away from careening fifty metres to a dramatic ocean death. I still feel sick from lunch, so I roll down the window, poke my head out, and release a little stream of brown vomit which trails off behind us. When I pull my head in again, I look at my father sleeping, and think about how life would be much easier if everyone were asleep all the time.

*

Finally, the car pulls off the road and stops close to the ocean. I can see the sun, low on the horizon, painting the car park of the Eden Killer Whale Museum red and gold. My father is still asleep, so I open my door very quietly and get out to stretch my legs, hoping the car is smart enough to not accidentally drive off without me.

The museum is about to close, but I pick up a pamphlet out the front that lists all the Killer Whales that used to live in the bay: Tom, Cooper, Hooky, Humpy, Jackson, and Typee.

A shadow falls over the brochure, and I know that my father has finally woken up.

"Did you know that Killer Whales eat smaller whales?" I say.

"Well, biologists probably don't name a whole species 'killer' without pretty good reason," he says.

"Some people eat whale," I say. "I guess that makes them 'Killer Humans'."

I turn to stare at my father, who smiles as he glances over the Killer Whale Museum and squints at the perfectly horizontal lines of sky and sea and sand. He's seeing the world directly, now, without the Memoriae's cameras relaying it back to him – that's why he needs to squint. I wonder if he's looking for whales.

“There’s a skeleton of Old Tom the orca in the museum,” I say.

“Hmm,” my father says, but he’s not really paying attention. From his jacket pocket, he pulls out the photograph of the girl, standing on the beach with a pair of fins in her arms.

“That was taken down there,” he says. “Lisa was here, with your grandparents, on a holiday.”

“Lisa?” I say.

My father nods. “LB – Lisa Bungard. My sister.” He points to a little wooden cross that has been hammered into a patch of grass. “She drowned. When my parents weren’t watching, she got caught in a rip or got a cramp, or... something. When they looked back, they couldn’t find her.”

“When?” I ask. I’m clenching my fist, but I’m not sure whether I’m sad or angry or just confused – or everything at once. I think about my father’s recordings, and the absence of Lisa from all of them. I wonder whether she was somehow erased from all of them, her presence somehow perfectly sliced out of my father’s childhood.

“Just before I was born, JJ. That’s why you never saw her – I never saw her, either. I didn’t even know about her at all until that week when I refused to wear my Memoriae. I was so angry at my parents, and I was so indignant about your grandfather’s experiment. My grandfather drove me out here, just like I’ve driven you out. He wanted to explain why he made me wear the Memoriae – why he wanted everything I did to leave traces.”

We walk over to the wooden cross and I can see my aunt’s name engraved on a little plaque set into a slab of concrete: ‘Lisa Bungard’. Somehow, only now does any of it feel real.

“When you showed me the photograph, I knew it was her,” he says. “I’d never even seen any pictures of Lisa before – your grandparents refused to show me.”

“Were they in the locked room?”

“Yes,” my father says. “Well, maybe. Even years later, they would never tell me what was in there, but I knew, after your grandfather took me here, that it must have been Lisa’s bedroom. When your grandparents finally moved out, after you were born, they must have thrown all of the stuff in that room away – or, perhaps, the room was empty the entire time I was a kid. In any case, though, I

never managed to find anything belonging to Lisa – never any pictures, or anything from her childhood.” My father shrugs. “I know barely any more about her than what your grandfather told me about her the day he took me here. It was incredibly odd. I came to understand, on some level, why he’d grown so interested in recording, but I never understood why they got rid of every memory of Lisa.”

“But... that’s not fair,” I say. “That’s not fair to you.”

My father and I gaze out together over the bay, both of our Memoriaes capturing the golden glimmer of the water as it laps the shore.

“Well,” says my father, “I’m not sure it was ever about what was fair to me. Your grandparents were entitled, I guess, to grieve the way they needed to grieve. If that meant them never showing me anything to do with my sister, or pretending she never existed at all, who was I to tell them that wasn’t right?” My father pauses. “After all, I’m not exactly a model of good parenting, JJ. Look at what I’ve put you through – seventeen years of forcing you to live through a recording?”

“It’s okay, Dad,” I say.

“No, it’s not.”

I have the lime green Squeezer my father gave me in my pocket, and I hold it in my hands while my father isn’t watching. The night before, after coming back from Autobio, I’d looked up Morse Code on the old laptop in my memory fortress. Now, I try it myself:

.. / ...- --- .-. ---- . / -.- - - -

I forgive you.

I can faintly hear the buzz of my message on my father’s temple, but he doesn’t say anything after he’s received it, just nods slowly.

“Dad?” I say, eventually.

“Yeah?”

“I think I know where grandpa might have kept his memories of Lisa.”

Motels and apartments

It's much too late to drive back home, so we drive up to a motel where everything is precisely the same shade of brown. There's a fishing competition on in Eden, so there are lots of briny-smelling utes in the parking lot and only one room left.

"Is Mum staying at a motel like this?" I ask.

My father shakes his head.

"She's not really at a motel, JJ," he says. "She told me last week that she'd found an apartment to rent. I don't think she's going to be moving back."

"But..."

"It's okay. This hasn't been a sudden thing – and it's the right decision, for both of us. You'll be able to see her as often as you'd like."

I thought about the logistics of it – of having two separate memory fortresses, one in my mother's new apartment, and one in my father's house. Then I thought about how, in twenty-eight years' time, my mother would begin to splinter out of my father's recordings, as their lives split in two. Her life, from this week onwards, would not eventually play out before me. Everything she did would now go largely unrecorded. My mother would find new jobs, and new partners and pets and houses and hobbies, but none of them would be captured by my father's *Memoriae*. The only way for me to see any of my mother's future would be to experience it with her, in the present.

"You haven't been looking into the *Memoriae* very much today," my father says.

"I guess not," I say. "You started back at school today."

In the past, I can see not-yet-father is in his living room at home, playing a videogame. He shoots down hordes of Nazi zombies. I can see my not-yet-father maneuvering his man around the terrain of the dystopia, using an index finger to depress the trigger button. Heads explode. Guts pour out. It's not very interesting.

"I think I might try to stop watching it so much," I say.

"Really?"

"Maybe. It's starting to get too difficult to avoid spoilers, anyway."

My father takes off his shoes and, after untucking the brown blanket, climbs into the bed by the window. I climb into my own bed, then flick off the lights.

“How do you think they managed to perfectly match the lamp to the curtains?” I ask.

“Goodnight, JJ.”

Here and now

On the way home, we pass by the train line in Northcote, near where my father and my mother stenciled their revolutionary slogans twenty-eight years earlier. We park the car and get out, and my father takes my hand and helps me onto the tracks.

A train slows down and honks at us as it passes, and my father waves at the driver and mouths, “Sorry!” Once we reach the wall, I can see that all of the old graffiti has been sprayed over. Over the years, the walls have turned into unerasable messageboards, with illicit romantic gestures crisscrossing the misty lines of old tags and tiny artworks.

“You stencilled it over here,” I say, but when my father and I both crouch down to look, there’s nothing there – just layer upon layer of old ink that has bled together.

*

The house is dark and empty when we get home.

“Are you tired?” I ask.

“No,” my father says, even though he looks exhausted. “I’m okay. Let’s do it.”

My father and I trudge down to the basement, fighting cobwebs as we begin to comb through piles of unlabeled boxes. I think about how so many tiny animals – slugs and spiders and mites and snails and earwigs – seem to have a habit of finding their way into old things, as though the past is really nothing more than a place human beings construct for them to nest in.

Eventually, we find my grandparents’ old possessions. I pull open one box to reveal a stack of text adventure games, all in their original packaging, now more faded and flimsy than ever.

“Oldies but goodies,” my father says, smiling. He opens another box, this one full of chipped terracotta pots, now devoid of flowers. “A lot of stuff was sent to Autobio. Anything related to the Memoriae, at least. They made a little computer science museum, next to the company gift shop.”

We step deeper into the box city, until my father stops.

“I think one of these could be it,” he says. “I think one of these could be Lisa.”

*

We plug each of the tiny flash drives into my father’s computer in turn, and I run a search on each of them: ‘tulpa’. Finally, on the fifth drive, a project appears:

TulpaNet.exe.

My father pulls a chair up as I open the file, and my grandfather’s machine-generated internet appears, beginning with ‘Spanky’s Starship’. I click around, trying to find Lisa’s old website, but the project is in the same state as when I last saw it – a mush of random random letters and numbers.

“It’s corrupted,” my father says. I nod, but I keep on going. Back when I was younger, as the imaginary internet had begun to collapse, I’d learnt to find my way around it. I click from the homepage of an octogenarian grunge-obsessed French army veteran, through to the dating website profile of a British astronaut ballet dancer, to the social network feed of a Russian neo-tribalist snowboarder: impossible constructions, combined from the digital detritus of the victims of my grandfather’s old phishing scams and Trojan Horses. I click into chatrooms and can make out strange fragments of conversation between them:

sassyarabesque24: have any of u ever been to the moon?
sportyalexai: u havnt been to the moon!
sassyarabesque24: i have! how do u want me to prove it?
sportyalexai: every moon landing was a fake
sassyarabesque24: not the one I took part in
sportyalexai: hmm well tell me how you got there then
pierot_nirvana1942: bonjour
sportyalexai: go away pierot_nirvana1942!!
sassyarabesque24: iobUIBUO3ui3Y
*UVV&*76{_(yufUIGIUilug3987t78t*
sportyalexai: UGIbfiof78335iof(&&*gvfe335467*
pierot_nirvana1942: UIVBUBIf803oiubjka98pg9832gtw!!?_

I create an account through my grandfather’s replica of ICQ chat and enter

the conversation.

jj865237: do any of you know lisa_b_56267?

The chatroom stalls, and my father and I wait in silence for the tulpas to respond.

sassyarabesque24: ~~ ERROR ~~ NullPointerException: null

sportyalexai: %^897g9flgyguYUF67

“Perhaps it isn’t worth it,” my father says.

“I’ll see if I can find another way.”

I keep moving through the broken simulation, through web pages full of error messages and garbled code. I find the old role-playing chatroom my grandfather used to frequent, still inhabited by computer-generated players pretending to be orcs and wizards and witches navigating through subterranean dungeons.

“Your grandfather had a strange mind, didn’t he?” says my father. “Too smart for his own good – maybe too smart for the good of any of us, too.”

“Wait. I think I’ve found it,” I say.

My father peers over me as I click onto Lisa’s homepage, with everything arranged just as it used to be – like an ancient computer operating system, with a grayscale mess of folders and text files, and a little pixelated wastebasket in the corner.

I tap on one of the files, and it loads a page full of gibberish – all ones and zeroes and asterisks and exclamation marks.

“She used to be here,” I whisper. “I used to read her entries.”

“She was probably just another one of your grandfather’s spam email personas, JJ. Just like all of the other people in this thing.”

I shake my head.

“No. She was different. I always knew she was more real than the others.”

“Maybe,” my father says. “But we’ll never know what he did to create her. It might not have been Lisa at all. He might have just created his own impression of her. She was only thirteen when she passed away – she would have been too young to have left very much behind.”

I stare at my father, and he stares at me. Our Memoriaes are locked on one another, recording everything.

“Not like us,” I say.

“No,” my father agrees. “Not like us at all.”

I tap on the wastebasket. There’s a single bitmap image in there, and I click on it once to open it up. Gradually, it loads, and a little monochrome picture of my grandparents appears on the screen. They look only slightly older than in the photograph the man gave me the day I visited my father’s childhood home – maybe only in their late twenties, closer to my age than my father’s. They’re holding onto one another and leaning in close. Cradled in both of their arms is a blanket, and inside the blanket, a few dozen pixels reveal a tiny face. I squint and stare, to see if I can make out the details, but the resolution of the picture is far too low.

The chatroom window blinks, and when I click over, I see a message.

lisa_b_56267: hey jj865237, long time no see!

“That’s enough,” says my father.

“But she’s just here,” I say. “Look!”

My father pauses.

“She’s not really in there, JJ,” he says, and I turn and watch him take the photograph of Lisa out of his jacket and turn it over in his fingers. “I think it’s time we stop.”

“Okay,” I say. I close all of the windows of my grandfather’s simulation, remove the flash drive, and set it down on the table. My father places Lisa’s picture back in his pocket, then rests one of his hands on my shoulder. Both of our Memoriaes are recording, but I’m not sure I’ll ever see this moment again.

Through my earbuds, I can hear the past trying to get through. A thunderstorm is brewing, twenty-eight years in the past, but it sounds much further away than usual.

Epilogue

At my last meeting with Nils, he hands me a stack of papers, neatly bound.

“I’m finally finished,” he says. “I’ve completed the case study.”

I look at the title, rendered large on the cover, in a bold serif font: ‘For The Places We Have Never Known: the psychology, philosophy, and neuroscience of recorded lives’.

“You kept the title,” I say.

“Yes. I thought it was a good one.”

Nils looks at me nervously as I flick through the pages.

“It’s nothing you don’t already know,” he says. Still, I recognise as well as Nils does, that that isn’t quite right – there is a difference, sometimes tiny but sometimes vast, between what you can see in yourself, and what a Watcher can see in you.

“I won’t read it now,” I say. “But I will read it. Maybe... in a few years’ time.”

“Yes,” he says. “I think that’s a good idea.”

Before I put the case study in my satchel, I page through it quickly again. Certain passages, I notice, are rendered in italics, and when I pass my eye over them, I can see that the text is familiar – fragments of the biography I had been writing about my father. Nils furrows his brow when he sees me skimming through them.

“I hope that’s okay,” he says. “It’s not too late for me to take them out.”

I smile. “It’s fine,” I say, because I know there is no point writing the biography any longer. “I’m just glad you could use them.”

Nils nods, then scratches his beard. In the corner of the room, in the big fish-tank, there is a brand new Siamese Fighting Fish bobbing around: Alrik Four, I suppose.

“So, on a scale of one to ten,” Nils begins, “how are you feeling this week, JJ?” This time, when I look over at him, he isn’t holding his pen and paper at the ready. He smiles. “This isn’t for my study any more. This time, I’m just curious.”

“I’m good,” I say. “Maybe... nine out of ten?”

“And why that number?”

I tell Nils about how everything, now, is more confusing than ever. There are a lot of sad parts – but that is okay, because there are a lot of happy parts, too.

I tell him about my mother's new apartment, and about Luke, the man she's been seeing for the past few months. They both work in the linguistics department at the same university, and whenever they are together, they talk so fast that I can't keep up.

Nils doesn't seem very surprised when I tell him that my parents got divorced, without telling me, in the year after my grandfather died. My parents' arguments, I now know, had revolved almost entirely around how to break the news to me without spoiling anything.

But it is all spoilt now, and that's alright.

Then, I tell Nils about Charlie, Ann-Rita's son, who is my age and obsessed with extreme sports. My father had invited him and Ann-Rita over one evening, and I'd sat with him on the sofa while he'd watched the snowboarding on television, and he'd told me about all of his favourite snowboarders while I'd nodded and pretended to know what he was talking about. When I'd gone into the kitchen to grab a snack, I'd seen my father and Ann-Rita holding hands over the dinner table. Nils doesn't look especially surprised at this detail, either.

I'm starting to go hours and days without the Memoriae, but weaning myself off the past isn't easy. I've opened the blinds to my memory fortress, but I still always keep my Memoriae close at hand, just in case. I want to make sure my not-yet-father is okay, but it isn't just that. Really, I don't want to betray my grandfather. I want to be there on maintenance days, when it's just him and me, and he leans into the camera and speaks to the Watcher. I don't want him to feel as though his experiment has been a failure.

The last thing I'd watched through the Memoriae was my not-yet-parents taking acid together. They'd driven down to a spot on the Peninsula and taken a tab each and spent the day marvelling at the world, but I couldn't see anything that was going on in their heads. The camera was never going to be able to record that.

My father and I have framed all of the pictures I'd found at his childhood home: Lisa, and my grandparents, and John and Betty, who were only strangers to us. We hung them in the living room – these tiny slices of the past, these chemicals on paper that somehow contained perfect moments in time. The fact

that there was almost no context to the pictures was, we decided, exactly what we liked most about them. We couldn't come close to filling in the gaps in the past, but we could do our best to try to remember the present.

Of course, my father still wears his Memoriae, because he has to. His life is still feeding into the data centre buried in the hill, and Autobio is still on track to, eventually, have the entire world recording every moment of their lives. But I know that Ann-Rita's Playground Division is working on more gadgets like the Squeezers, designed to enable those who are being recorded to hide in plain sight. If my father can't stop my grandfather's future from arriving, after all, at least he can work to subvert it.

The last time I saw both of them, my father and Ann-Rita gave me a handful of Squeezers, in all different colours. I paired them with my Memoriae and then passed them on, one to my mother, and one to Charlie, and one to Luke, so that whenever I wear the device and find myself being drawn further into my father's past, my head buzzes with secret messages from those around me in the present.

"Would you like one?" I ask Nils. I take a shiny black Squeezer from my satchel and hand it to him. "Just in case you ever want to offer me advice... now that you're able to."