Prologue

Boris

Late 21st Century AD

Two men, one young, one old, sat at an old plastic table in a sparsely furnished apartment, playing a game of pinochle, each of them with two hands.

The older gentleman grumbled, “I’m telling you that it’s not safe.”

The younger-looking academic scoffed at this. “I tell you, man, it *is*.”

The gentleman shook his head. “Do you have any proof it’s really constant; that it isn’t just a break followed by an imitation of the original?” He gestured at the sleeping man on the couch. “Look there, he’s asleep, which makes him seem human. But his joints are all titanium! His neurons are really transistors! How do we know that the consciousness he experiences isn’t just a leviathan algorithm which performs an imitation indistinguishable from the real thing? Do we have any proof at all that if I went through the same procedure, I wouldn’t just die afterward, replaced by something that acted exactly like me, and indeed believed it *was* me?”

The academic smirked, lowering his cards to the table. “I’ll wake him up and ask him. Boris. Boris!”

The figure on the couch jerked awake. “Ah?”

“Boris, you awake?”

“I am now.” He cracked his jaw, producing a peculiar metallic ringing sound. The gentleman followed suit, and rested his cards on the table.

“What do you suppose you are?” The academic put forward. “Human, or a machine imitating a human?”

“Human, I guess, same as you.”

The gentleman, Frank, cut in. “But your brain, it doesn’t work quite like ours, right?”

Boris seemed puzzled. “I haven’t noticed much different. It’s not that different from a flesh brain, just a little faster, and my memory is better. What, you think I see you all as lines of code or something?”

Frank sat back in his chair, the academic (Alex) holding up a finger.

“What’s the square root of 19,272?”, asked Alex.

“It’s one thirty-eight, point eight, two, three, six, and a bunch of garbage after that.” A corner of Boris’s lips twitched upward, for a brief moment. “It’s a parlor trick, that’s all. It doesn’t mean my brain doesn’t work like a brain.”

“How old are you, Boris?” Frank asked.

Boris sat up. “I’m 38.”

Frank’s eyes widened. “Yet you’ve already had the procedure done? Why is that?”

“You see, I had multiple sclerosis. Had leg spasms that got so bad, I couldn’t walk without crutches. Eventually, it got worse and I needed a wheelchair. On top of that, I had terrible mood swings, and I couldn’t speak right. After a few months of that, I learned about this procedure, so I underwent it. Now, I can walk, talk, and keep my feelings in line. I can chew and swallow solid food, too. You never appreciate that when you can do it without difficulty, but after the third time you put a spoonful of stew into your mouth only to have it dribble back out again, because you can’t keep your lips closed, it gets really discouraging.”

It was still odd that those who underwent the procedure still had to eat instead of just plugging into a wall every night, Frank thought.

“Boris, would you mind telling Frank what you experienced before and after the procedure?” Alex looked over to Frank briefly, before returning his gaze to Boris.

“I wouldn’t mind it at all.” Boris stood up from the couch and went over to the table where Alex and Frank were sitting, their game of Pinochle long since abandoned. Boris gestured at the cards before picking one up. “You were playing Pinochle without me?”

Frank grinned. “I wouldn’t call it playing.” He nodded at Alex. “This stinker over here cheats.”

“Anyway, the procedure.” Boris sat down, idly fidgeting with the card. “What they told me is, they put you under, they take your brain out, hook it up to their machine. The machine reads your brainwaves, your thought patterns. It does it by placing you in a virtual reality sort of a thing, and throwing all kinds of situations at you. The computer keeps this up until it knows every single thing about you, all your memories, your priorities, and your whole identity. Anything that comprises ‘you’, even the stuff you don’t have conscious access to, gets brought over. Repressed memories, opinions of strangers you’ve run into only once or twice, the fucked up ideas you have sometimes but never ever say out loud. Every single thing.” He put the card down. “I don’t remember the whole process of moving from my brain to what I’m running on now, honestly it felt a lot like a dream.”

“So do you have free access to those subconscious memories now?”

Boris frowned a little. “Honestly, no. It doesn’t really bother me much, because I never did to begin with. Whatever firmware is in here that’s running the subconscious does a damn good job of replicating the original. It’s honestly exactly like using a normal brain, except this one won’t get old or run down.”

Frank chuckled a bit to himself. “When I was a youngster, I had to have gone through a new computer every five years, It just gets too slow and cumbersome to deal with after too long.” Frank’s smile faded. “How long ago was your procedure?”

“Not too long, just a couple years.”

Alex’s smug grin relaxed into a neutral expression. “Boris, have you noticed any slowdown since you had the procedure done?”

“Isn’t most of the slowdown due to accumulations of crap-ware? My brain doesn’t have an internet connection, and it’s still partially biological so the parts that run down can regenerate. But no, I haven’t noticed any slowdown.”

Frank coughed. “What do they do with your brain after everything gets transferred over?”

“Honestly, this is one of the biggest misconceptions about the process.” Boris tapped his forehead. “They put most of it back in there to help regulate your consciousness.”

“One thing I never understood about the whole idea of having computer parts in your skull, and then closing the whole thing off, especially with most of your brain still in there.” Frank pulled his chair a bit closer to the table, and straightened out his back, placed his elbows on the table, and laced his fingers under his nose. “What… How is it staying cool?”

“Excuse me?” Boris asked. “You mean, how is the CPU not overheating?”

“Yeah.” Frank relaxed his posture slightly. “How is the CPU not overheating?”

Boris absentmindedly felt his forehead. “I don’t know the exact methods they use, but they, essentially, use your blood as a liquid coolant.” Boris was relieved to feel that his forehead felt normal.

Abruptly, everything ended. Frank ended, Alex ended, and the Boris that was sitting in that room ended.

Boris’s brain was removed from the transfer rack, the upload of his mind now completed. His body lay prone on the table, his damaged spinal cord and peripheral nerves replaced with infallible wires and durable insulation. A group of doctors stood over Boris’s body, pressing different buttons. One sequence ran his legs in a circular motion, as though he were riding a bicycle. Another caused his body to crack his knuckles. The test device was removed from the socket. The replaced nerves worked properly. The new brain was removed from the transfer rack, and set into the skull.

Several hours later, after significantly more work, Boris’s body woke up.

“Boris, do you understand where you are?”

Boris looked around, his eyes adjusting to the surgical table lights. “The surgical table, I think. Did you start the procedure yet?”

One of the doctors stepped forward. “It’s already completed.”

Boris stared down at his hands in disbelief. He tried moving his legs. They responded as though his MS had been just a dream. “How did the procedure go? Did everything go alright?”

“You tell us.”

Boris shrugged. “I feel okay, I guess.”

“Does the location ‘Willow Lane’ mean anything to you?”

“I don’t think so.” Boris scanned the room, noticing how many people were there for the first time. Upwards of twenty people seemed to be staring at him, or at their clipboards, where some of them scribbled furiously.

“What about a bright red rubber ball bouncing down the stairs?”

“I mean, I probably played with a rubber ball when I was a kid, but that doesn’t hold any specific meaning.”

“What about Larry’s Tavern?”

“Nope.”

“Pinochle?”

Boris paused. He thought he remembered something about that word, at the edges of his memory, but he couldn’t place a finger on it. “No… I don’t think so.”

“Susie Richter.”

“That’s my wife’s maiden name.”

“The oboe.”

“How many questions are you guys gonna ask me?”

“Please cooperate, Boris. We’re nearly done. The oboe.”

“No. I know what an oboe is, but no, nothing specific.”

“What is your mother’s name?”

“Linda.”

“What is your eldest brother’s name?”

“Nate.” More scribbling.

“Julianne.”

“My niece’s name.” The scribbling was starting to bother him.

“Terry.”

“My son.” He was ready to strike the nearest source of that scribbling noise.

“We’re done. Thank you, Boris.”

Boris was helped into his wheelchair and escorted out of the room. His complete brain remained behind. It was preserved flawlessly, intended to be dealt with later.

Boris was the first human being to receive a silicon replacement for his brain. The year was 2071 AD.

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HEART

WITHIN

HEART

Anthony Armetta

**Volume One**

Soul

**Chapter One**

To Hold a Soul

Year: 2149 AD

Julianne sat in her cramped office, an excessively old, stout woman, kept not only alive but vigorous seemingly by sheer willpower alone, hunched over her computer screen. Her shock of short white hair caught the light from the screen, appearing like a halo around her wrinkled head. The grid on the screen displayed a logarithmic curve superimposed over a straight line. **“Projected Volume”**, it was titled. A dotted line vertically bisected the curve, labelled “336 cm3”.

“See this?” She muttered.

The younger-looking tall fellow sitting nearby mumbled. “See what?” He looked up and squinted at the screen with dark brown eyes, under his black, bushy eyebrows. “Do I see a graph, is that what you’re asking?” He dug some indiscriminate black gunk from under a fingernail and flicked it under a nearby table. “Mind telling me what this means? I don’t speak *lines*.”

Her enthusiasm faded, but only slightly. “It means that the projected volumes are, for the most part, within the same size scale as us.”

He scratched under his stubbly chin. “So?” His moustache twitched as he spoke.

She was defused a bit more. “*So*, that means we can hold them… most of them. This is extradimensional shit, Terry. Before this moment, no one alive knew how big a soul was. Now we know. It’s, in most cases, a little smaller than half a liter. It means we can take it out of the dimension it’s in, and we can bring it here, *and we can hold it*.” She turned her chair around. “Let’s take this ball that’s on the table. And let’s say you’re sitting inside this sheet of paper, as a two-dimensional Terry. Now, observe.”

She held the ball above the paper. “Now, to you, how big is this ball?”

Terry frowned, scratching his medium-length, wavy black hair. “Doesn’t that depend on where the paper intersects the ball?”

She smiled. “Yes, that’s it exactly. That’s why this is important. Since the souls are four-dimensional in their natural state, we didn’t have any way of estimating how large they’d be once we forced them to intersect our ‘plane’ of existence. Really it’s a ‘space of existence’, but I’ve never liked the way that sounds.” She dropped the ball back onto the paper, and turned back to face the computer. “There’s no mystique to it.”

“I’ll report this back to the board, see what they make of it.” Terry sniffed. “You ought to take a break and bathe or something.”

The extremely old woman groaned, hammering at keys while speaking. “And go to all that trouble? You could try being nicer to me, you know. They say familiarity breeds contempt, but you really *could* be nicer to me.”

Terry scratched the back of his calf with the toes on his other foot. “One thing bothers me. If the size of the object depends upon how far into our dimension it intersects, how can we say it’ll have a defined volume once it’s here?”

“Since it’s intersecting us at an angle perpendicular to any line we can fathom, we have no means of pushing it back out or pulling it further in.” She paused, her hands held above the keyboard. “Alright, back to the table.”

She spun around and Terry handed her the paper and the ball again. “So are you-”

“Hold this out, stretch it between your hands and hold it tight.” She pushed the paper back into his hands. He held it in front of him, taut. She smacked the ball into the paper, causing a four-cornered rip to form, allowing ball to ‘pass into’ the paper. “Alright, so, with the ball where it is, and with you inside the paper, pull the ball further in.”

Terry puzzled at it for only a couple of seconds. “Well, I couldn’t.”

“Right. Now try to push it out, from within the paper.”

He looked at it again, and this time a small smile fluttered on his face. “Well, I could ring the circle that I can interact with, like with a chain or something, and if I pushed on all sides of it at the same time, the ball would be forced out, wouldn’t it?”

The old woman, Julianne, returned Terry’s uneasy smile with a relaxed grin of her own. “That’d work if you had any surface area on the ball. But, you don’t. In fact, it shouldn’t be possible for you to do anything but slice into the ball. Of course, since you don’t even have a sharp edge, you have *zero* surface area on the ball from the ball’s perspective; you wouldn’t even be able to slice into it. By all accounts, it should be impossible to move or influence from your perspective.”

Terry put the paper and ball back onto the desk and sat down again. “But if that’s the case, how would we be able to hold the soul once it’s retrieved as a 3D object? If it’s just a projection of a 4D object, shouldn’t the 3D object occupy a fixed point in space?” He thought a moment longer. “Wouldn’t it stay put while the earth moved away from it?”

“That’s the beauty of this procedure, kid.” She brought up a different window. “Look at this.” She sniffed. Terry was right, she needed a bath. “This is the projected mass graph.” It was an S-curve, staying mostly flat before rocketing down at the lower end, and upward at the higher end, almost asymptotically. “The procedure folds enough of the 4D soul into its 3D projection for us to interact with it. That folding gives the 3D projection its mass. Now, since we’ve folded some of its 4D shape into its 3D projection, the sliver of it that we can see and interact with now represents a non-zero portion of its 4D surface.” Terry stared at the rips in the paper, where the ball had ‘entered his dimension’. He frowned. “Do you understand or would you like another analogy?”

“It might help.”

“Alright.” She cracked her knuckles, quite loudly. “Imagine if, instead of the ball simply being placed through your plane, we squashed it at the point of intersection so that some of the actual surface and volume of the ball are compressed and pulled directly into your plane? It’d look something like Saturn, with its rings, the rings being the portion of the ball that physically exists in the plane.” She smiled again. “That’s the point. We’re not just making the soul intersect our dimension. We’re pulling it in here so hard that part of it *physically exists* in our dimension. That’s another reason for the consistent mass graph here. We can only pull so much of it in. And once that happens, the bit that’s in here is now affected by gravity, air pressure, and most importantly our hands and measuring devices.”

“What are those curves at either end of the graph though?”

“It’s just a mathematical artifact, I don’t think it’ll be borne out by reality. The curves are ten standard deviations from the mean, after all. You ever hear the phrase *ten sigma event*?”

“I can’t say I have.”

“The probability of one is zero, point, and then there’s 22 more zeroes, and then one five two six five.”

“Oh.”

“So, even if we retrieved the souls of every single person on earth, and I mean all twelve billion of us, there’s still only about a 2 in a billion chance of even one person, out of all people, falling on those wild curves.”

“That makes it seem likely though. Like, I get that it’s still really unlikely, but it still seems like it could happen.”

“Even if it does happen, you see the top of this curve here? It only goes up to 6 kilograms by the time it gets to the twelve sigma point. That’s like a person being *six meters* tall.”

“Oh, I didn’t read the scale. I was afraid it’d be like, black-hole level mass. 6 kilograms isn’t that bad.”

She sighed. “Terry, lay-people will tell you anything can cause a black hole. They said the same thing about nuclear power. They said the same thing about the LHC. They said the same thing about quantum teleportation. But it’s a lot harder to make a black hole than people seem to think. You need a *lot* of mass, and a *lot* of energy. It’s easy to think that you can just ‘use science’ to create a black hole, but it’s never scientists who are saying it. It would be difficult if you were actively trying.” She cleared her throat. “Sorry for going off like that, it’s just too often that I have to deal with people citing pseudoscience-type claims.”

Terry stood back up. “It’s alright. I’ve gotta go write up my report to the boss guys, so I’ll see you later, Julianne.”

**Chapter Two**

Age

Year: 2072 AD

“Julianne, wake up.”

The girl lying in the bed squinted into the morning sun and searched (eyes half shut) for the source of the voice. She found him in the form of an older-looking boy leaning against her doorframe.

“Hey, Terry.” She yawned. “What are you doing here?”

Terry smirked. “Don’t you know what day it is?”

“No… Wait. It’s my birthday.”

Terry’s smirk widened into a genuine smile. “That’s right. You’re nine years old today.”

Year: 2153 AD

Julianne’s eyes opened. She felt her face and lamented that her return to her youth had only been a dream. Her doughy, wrinkled skin was the same as it had ever been.

A young boy bounded up the stairs, without a single care for how noisy his footsteps were, and leapt off of the top step to land squarely in Julianne’s doorframe. “Auntie Julianne, wake up!”

“I’m up, sweetheart.”

“Do you know what day it is?”

“It’s my birthday, dear. It’s Auntie’s birthday.”

“Yeah! Grandpa says you’re ninety years old today!”

Julianne smiled. “Yes, dear. Auntie is ninety years old.”

The boy hopped into the room. “Are you gonna have a gene thererpy?”

Julianne remained silent. Terry had ascended the stairs and was standing behind the young boy. “Mark, go back downstairs and play with the other kids.”

Mark made a small noise of protest, but descended the stairs, stomping all the way down. “God, I can’t believe you’re older than me, kid.” She began pulling the covers back over her, but Terry strode over and pulled them back down.

“Your family is downstairs, waiting to see the birthday girl.” Terry stepped back from the bed. “What got into Mark? What was that about gene therapy?”

She shrugged. “I wasn’t planning to do anything. He probably saw something on the news about it, and figured since I’m old I’d be interested.”

Terry folded his arms and leaned back against the doorframe. “But *are* you interested?”

Julianne swung her thin, veiny legs out from under the covers, where they mercifully remained mostly covered by pajama bottoms, and slid her feet into a waiting pair of slippers on the floor. “If I was interested, I’d have done it while I was younger. Help me up.”

Terry held out a hand and pulled her up. She was losing weight. Sixty years ago, she’d have been thrilled to be at 110, but at 89… no, 90 now, it was worrisome. “I did it, you know.” Julianne looked at him and grimaced. “You don’t need to give me that look. It was cheap. My bones started creaking when I’d get up, my stomach stopped working right, and I developed that nasty cough.”

“The reason I’m hesitating isn’t because I’m worried about the money.” Julianne was slowly making her way to the stairs. “I saw what happened to Uncle Boris.” She frowned, creasing her brow. “I know that it’s different with you, now, but it’s no less unnatural.”

“Yeah, I know dad went off the deep end a few years after he got home from that surgery. It was great to have him walking around again… But”, He paused, helping her sit down in the stair lift chair, “that’s why I didn’t have my brain worked on like that, apart from the gene therapy. I didn’t want...”

Year: 2087 AD

Boris (age: 55) sat in the recliner in the living room. It was 2:40 AM. He had been sitting in the chair for the past three hours. Repeating, over and over again, “I am not here. I am not here. I am not here.”

Terry (age: 26) had slept over at Boris’s house, that night. He’d heard the muttering, woke up, and found Boris in the living room. “Dad?”

“Terry.”

“Yes?”

“Terryterryterry. I just realized something.”

“What?”

“I’m not here. I am not here.”

“What do you mean, Dad?” Terry sat down on the couch across from the recliner.

“The real me is elsewhere. I’m just a copy. I’m the fake.”

“What do you mean by that?”

“I saw it, Terry. I saw the real me. I hooked up my brain to the internet just earlier. The brain I… came from, it’s hooked up to the internet, too. I was just talking with him. Wanna talk to him too? He misses you, Terry.”

“Dad, I thought-“

“So did I. But there’s no brain up there. I opened my head. I had to check. There’s no brain in my head, only computer parts. There wasn’t even any pain.”

Terry looked down at Boris’s hands. They were stained a dark brown. Boris hadn’t even bothered wiping off the blood. “This is surreal, Dad.”

“I’m not your dad, Terry.” Terry looked up at his head. The top half of his skull was peeled back, held on by a simple flap of skin. That was stained brown, too. Crudely soldered wires, which Boris had just added, poked out. “Your dad left this body 19 years ago. This body I’m in. Terry. This body that watched you finish high school, get married, and get your degree. It isn’t mine. I helped raise you, Terry. I love you. But I’m not your dad.”

Terry didn’t realize he was screaming until a neighbor started banging on the door.

That was a nightmare Terry had been having on and off for the seventy years since it had happened. “Terry, you alright?”

Terry snapped to, realizing he’d been staring at the wall. “Was I screaming just now?”

“No. Look, I’m sorry I brought-”

Terry held up a hand. The silence was incomplete, due to the soft whine of the stairlift. Julianne had made it halfway down the stairs, but Terry quickly caught up to her. “It’s fine. I’m okay. It’s been over seventy years, after all. A lifetime ago.”

Julianne broke eye contact, looking down the stairs. Mark, Terry’s grandson, smiled up at them. He was holding a cupcake with an unlit candle jammed into it at an angle. “Happy birthday, auntie Julie!”

The stairlift was nearing the bottom of the stairs. Julianne returned Mark’s sincere smile and graciously accepted the cupcake. “Thank you, Mark. Come give your auntie a hug.”

The stairlift reached the bottom of the stairs with a clunk, swiveling the chair outward as it did so. Mark stepped up onto the first step to reach her. They shared a warm embrace. “Terry, would you mind helping me up again?”

“Not at all, geezer.” He held out a hand.

“Watch that mouth, kid.”

**Chapter Three**

The First Soul

Year: 2155 AD

Julianne gripped the table as hard as her bony hands were able, staring down into the operating room. All nonessential personnel had been sent home for the day, as no one knew for certain what would happen when the soul was pulled in. In fact, this was to be the first time the fourth dimension was contacted by the third at all. For all her work on setting up the mathematical models for the composition of souls, she was anxious. Terry sat on the other side of the room, staring down at the surgical table.

The volunteer, one of their own with less than a month to live (inoperable pancreatic cancer, gene therapy refused), laid on the table, under anesthesia. The entry incisions had already been made, and the heart was opened. The contact tool, indescribable with everyday terms such as “sharp” or “small” or “silver”, or indeed even euclidean geometry at all, was inserted into the cardiac incision.

The air in the surgical room shimmered and vibrated as though there were a layer of hot air between the observation deck and the operating table. An audible groan, like a leviathan table being dragged by a hulking giant across a scuffed linoleum floor, was more than audible as the soul was dragged into observable existence. Five or six of the surgical technicians in the operating room doubled over, holding their ears shut. The head surgeon, steadfast as ever, maintained composure.

Julianne’s eyes widened. She could see it, manifesting, as if in midair, above the table.

“Anchor it, anchor it!” The head surgeon’s pleas were only barely audible above the persistent groan.

The anchoring tool was brought into the room. Unlike the contact tool (which though indescribable, was easily handled with one hand), the anchoring tool was seven feet tall, and four feet to a side. It was wheeled to the operating table, and the hood was placed over the manifested soul. The body was convulsing terribly underneath the soul. The anesthesia had become completely ineffective. He was screaming, “Put it back in! Put it back in! This is terrible! I want to die! Please, let me die!”, with only minor variations on the theme of either wanting the soul back where it came from, or wanting to die, over and over again, with pauses only for breath.

The anchoring tool was switched on. The hum resonated with the persistent groan already present in the room, amplifying it beyond a deafening level. Even in the sound resistant observation room, the hum was loud enough that several of the observers in the room left due to the discomfort. As the anchoring machine warmed up, however, the hum shifted from amplifying the groan to cancelling it out.

It began to descend, quite slowly at first, before falling from the air into the volunteer’s opened chest cavity. The anchoring tool was left running for several minutes longer, before being switched off and carted away. During this time, the constant screaming of the volunteer shrunk down into nothing, and eventually the heart (still visible) stopped beating altogether.

The corpse of the volunteer, undamaged apart from the incisions necessary for soul retrieval, laid on the operating table, the soul resting on top of the heart.

It was an oblong, red, oval-ish shape, roughly 14 cm in length, and about 5 cm wide at its thinnest point. The technicians (who were wearing radiation-proof hazmat suits) filed out of the room.

“So?” Julianne asked Terry, upon his entering the room. “What are the observed properties?”

Terry spread out a mess of papers on the desk, picked up the first sheet, and read from it. “Mass, 1.11 kg. Volume, 379 cm3. Therefore, density is just under 3.03 g/cm3. The measured temperature is 41.1 Celsius. Worth noting: this has been measured three times over the course of the last hour, and the temperature has neither increased or decreased.”

“That’s pretty warm.” Julianne concluded. “How about that volume, though? Pretty close to my estimate, if I may say so!” She reached for another of the papers in the stack, looked briefly at Terry, and after a nod from him, took one.

Terry continued, “I’d be inclined to agree, your model was very accurate. So, noteworthy bit here... No emissions from it apart from infrared spectrum, so, it isn’t radioactive.” Julianne smiled at that. “It’s translucent, a nice red color. The refractive index isn’t that different from air, at 1.15.”

“That’s a bit odd, isn’t it?” Julianne muttered without looking up from the sheet.

“Yeah, it is. Preliminary observations have revealed something else very strange.”

“Oh?”

“It’s nonatomic.”

“Yes, nonatomic… Wait.” Julianne looked up. “What do you mean by that?” She asked, slowly.

“I mean, we looked as closely as we could at it, and there’s no evidence it’s made up of discrete building blocks of any kind.” Terry leaned forward. “It seems to be a single unit.”

Julianne blinked, dumbfounded. “Come again?”

“It’s not made of atoms. It’s completely smooth, inside and out. It is a truly continuous material.” Terry leaned back into his seat.

There was a long period of silence, with Julianne repeatedly thinking she had something to add, but thinking better of it. Eventually, she said “So, no point testing for toxicity or chemical reactivity?”

Terry dismissively waved a hand. “No, there’s no chance of it interacting with anything, for better or worse.”

“So, what’s the source of the temperature?” Julianne paused to think. “How is it not simply phasing through everything, if it isn’t made of matter?”

“It seems to manifest a negative charge whenever approached by any object, but we don’t yet understand the source of the charge. At any rate, this lets us touch it like it were a normal object. As for the temperature,” Terry paused for breath, “It seems to stem entirely from the infrared.”

They sat in silence, reviewing the documents for a few minutes, occasionally comparing figures with the models created beforehand.

“What happened to the volunteer?”

“Didn’t you see him yourself? He’s dead.” He slid a stapled stack of papers, covered with a manilla sheet, across the desk. “The autopsy results declare the death a result of shock.”

“That’s a shame.” She looked back to her papers. “I was really hoping we could do this without killing the owner of the soul, but I suppose this was unavoidable.”

A few more minutes passed, before Julianne spoke. “Hey, Terry?”

“Mmm?” He flipped a page.

“I think I might get that gene therapy thing after all.”

Terry looked up, to meet her eyes. “Are you serious about this?”

“I’m completely serious.” She put down her copy of the autopsy report.

Terry followed suit, putting his copy down as well. “What caused this change? You were pretty adamant about not going through with it last we spoke about it.”

She inhaled, and let out a long exhale through her nostrils. “I’m too old to see this research through to the end. I don’t want to pass on before I see where this goes.” She stood up, leaning on the table for support, and stared down at Terry, waving away his hand when he offered to help her up. “I could die from a heart attack, or cancer, or simply stop breathing in my sleep, and I would die *without knowing what became of my life’s work*.”

Terry smiled. “I’ll refer you to my doctor. You won’t regret this.”

**Chapter Four**

The Demagogue

Year: 2156 AD

“Yeah, we’ll tune in. Thanks.” The phone clicked into its receiver, and the TV flicked on.

“-mer humanity aside. For millennia, humankind has been singularly obsessed with the idea of living forever. It has manifested itself in the form of a divine reward for a life lived without sin, in the form of a result of dabbling with dark arts, and now, at last, in the form of gene therapy. What began as a promising treatment for diseases such as Alzheimer’s and muscular dystrophy, now threatens to tear our society apart at the seams.”

Julianne turned up the volume on the TV, but only slightly.

“In addition, my friends, the scientists of this world have discovered and retrieved the human soul! Yet, these barbaric searchers for truth disregard all basic sense in their quest for greater knowledge, and sacrifice human lives to further their research! In their relentless pursuit of knowledge, not even the sanctity of human life is recognized!

“So it has come to pass, dear friends and followers of God, that our society, no, our very *world* stands at a crossroads of historic proportions. Will we turn back, and leave god’s will intact? Or shall we venture forward, to spit in the very eye of god, and accept whatever consequence He deems necessary, to punish us for our transgressions?

“Humans are only intended to live for so long, and in the past, to live beyond 120 years was a legendary achievement, and one worthy of adulation, for it implied the blessings of God Himself! But, friends, these days are behind us. Where once the realm of centenarians was sparse, filled only with those who had lived full lives in the service of God and their communities… It is now crowded with these same heathens who seek to rip the very souls from our bodies, in order to poke and prod them with sticks!

“Barely five days ago, friends and followers of the Lord, did these heretics sever a soul, too powerful for them to fathom. Twenty feet high, seven tons, black as-”

“Do people buy this garbage?” Terry asked no one in particular.

Julianne held up a finger. “Shush!”

“-ly a sign of the end, and I tell you, it was hot enough to melt rocks! It endangered not only the barbarians who ripped it from the body God intended it to reside within… Brothers and sisters, it is with a heavy heart that I report to you, this catastrophe is responsible for the deaths of well in excess of a million men and women. A million children of god, sent home before their time.

“The media will deny it, because they’re in the same pockets as these blasphemers who committed the very act. They will tell you, dear friends, that this soul was a tiny speck,”

“It was.” Terry muttered.

“and that they had time enough to evacuate the neighboring townships.”

“We did.” Terry muttered, slightly louder.

“They will tell you that the only lives lost were their own!” Terry buried his face in his hands and groaned. “But, friends, you must resist these lies! Already there are men and women who are 200 or even 300 years old!”

“300 years ago was the 1870’s, that doesn’t even make *sense*.”

“Terry, my hearing isn’t back to normal yet as it is, and if you keep talking over everything, I won’t be able to hear *any* of this.”

She switched captions on. Mercifully, they were several seconds behind the live broadcast.

They read: “*300 years old! A man named Albert Einstein once called compound interest the most powerful force*” at this point the captions had caught up with where Julianne had switched the captions on, “in the world, and he was right. These people, already immortal, amass the world’s wealth in their stock portfolios and in their homes, and each day that passes, their slice of the pie only grows, while ours recedes.

“If this is allowed to continue, we shall live in a society of oligarchs! The blasphemous option of casting aging aside shall become closed off to us, so that we may not even join their ranks! It is for that reason, dear friends, which I ask… No, I *implore* you, cut off any contact with those who have undergone this procedure. Do not sell to them. Do not send them dividends. Do not allow them to steal more food from the mouths of our children.

“Already our numbers are falling. Where there were One-thousand, two-hundred, fifty nine *million* souls on this earth only ten short years ago, now there exist only 1.17 billion. That’s like Adolf Hitler’s Nazi holocaust occurring every single year, for the past ten years!”

Terry spoke up, “I have to hand it to this guy, he’s pretty great at twisting numbers around.”

Julianne groaned and turned up the volume again.

“*Their manipulation of our media has caused*” and here, the captions catch up, *“*us to abandon the traditional pursuit of raising a family, and putting new men and women into the workforce. Their manipulation of our desires has caused us to abandon our return to God’s embrace in heaven when our work is done on earth. Instead, people today are choosing to simply live out eternity here on earth, instead of heaven. They have abandoned death and **they have abandoned God**!” The last words echoed throughout the stadium.

The audience, which the camera briefly panned over, was much larger than either Terry or Julianne were expecting. Their applause was deafening.

The suited figure left the podium, and a different, visibly less charismatic figure approached. “Ladies and gentlemen, what a speech that was! This was the Constitution Party nominee for president, Richard MacMillan!” This was followed by another blast of applause from the crowd.

Julianne switched off the TV, slack jawed. Terry, similarly dumbfounded, picked up the phone and dialed.

The voice on the other end answered. “Yeah?”

“Jim, you’ve got to be shitting me.”

“I thought you might get a kick out of that.”

Terry dragged a hand over his face, stretching the skin around his eyes and lips. “That was more like a gunshot wound than a kick. This religious wing-nut is running for *goddamn President!?”*

Jim chuckled. “I don’t think he’s going to win.”

“I’m not so sure about that, Jimmy. That was a pretty big crowd.”

“Terry, the guy’s a Cargill heir. They’re fuckin *trillionaires*. You think he couldn’t pay off a crowd to show up and yell real loud after his nomination speech?”

“Is that supposed to be reassuring? *If they’re*…” Terry lowered his voice before continuing, “If they’re trillionaires, then this makes them one of the richest families on earth.”

“Yeah.” Terry heard the distinct sound of a stubbled chin being scratched.

“So they could supposedly rig the election.” Terry lowered his voice further. “It’ll be the ’52 elections all over again, but this time without the big-money insiders on our side.” Terry dropped to a whisper. Not even Julianne could hear him now. “Not to mention, I have a feeling he’ll organize a headhunt for our kind if he gets elected. I’m not out to get lynched.”

“What, you worried about that, Terr?”

“I just think this guy is dangerous. I don’t like him.”

“You and me both. Hey, I gotta go, boss man’s here.” Terry heard the click of a phone being placed into its receiver and hung up, pinching his brow.

Julianne stared at her hands, marveling at how much fainter the veins on the backs of her hands had become.

**Chapter Five**

Destruction and Creation

**Part I:** Destruction

Year: 2164 AD

Julianne and Mark hiked up the hill, some of their family in tow. “Aunt Julianne, do you think it’s still erupting?”

“Mark, if it was still erupting, we wouldn’t be coming up here.”

Julianne and Mark were with Terry, Terry’s granddaughter Brianna (Mark’s mother), and Brianna’s husband Chris; a family outing, to see a rare example of a live volcano on the mainland. Several years have passed since the tiny, fiery, pitch black soul was retrieved. The magma shaft opened by the event has since matured into a small volcano.

The hill which they were hiking up was not the small volcano. It was simply a nearby hill which provided a decent view of the volcano. Chris, a painter, had brought a bag full of brushes and paint tubes with him, intending to capture the rare event on canvas.

Terry, seeing just how large the bag on Chris’s back was, asked “Chris, how long have you been painting for?”

“Since I was a little kid.” He grinned with pride. “It’s good for the soul, and if you’re persistent, it’s good for the wallet too.”

“How’s that?” Terry, while not exactly disdainful of the arts, had always viewed them as more of a hobby than a career.

“Well, this painting I’m about to paint, when we get to the top, could be worth thousands once it’s complete and I find a buyer.” He took a few breaths, as the hill had been steep for the past few-dozen paces. “Since this is a rare event, painted firsthand, it’s the sort of thing that could be hung in a museum someday.” There was silence apart from their footsteps and the sound of birds and crickets, until Chris spoke again. “Gramps, are you familiar with J.C. Schmitz-Westerholt’s artwork, The Sinking of the HMS Hood?”

Above, *Sinking of the HMS Hood*, public domain photograph  
Painting by Lieutenant Julius Caesar Schmitz-Westerholt, c. 1941

“Isn’t that the painting that sold at auction for a few hundred million a couple years back?” Terry smiled. “I see where you’re going with this... But weren’t you only hoping for a few thousand?”

“Well, yeah. I do alright for myself, but I’m hardly famous in the rest of the world. Even though that painting was the only historically noteworthy one he ever did, it’s in thousands of history books, and most people have seen it once or twice browsing the web, even if they don’t remember seeing it. That’s the kind of recognition I want for this painting. Subtle, but permeating, recognition.”

At that word, they reached the summit of the hill.

On the other side of the hill was a valley, but not a gentle sloping one. It was as though the ground broke and caved in, like an incomprehensibly large titan punched the ground, and in the middle of it all, a towering mountain of a volcano gently leaked smoke into the sky.

“It looks… almost like the surface of a lake after a giant rock plunges into it.” Chris remarked. But *this* is rock, which makes…” Chris fell silent, not knowing the proper terminology. “Terry, just what *are* souls? What are they made of?”

Julianne, overhearing the conversation, joined in. “I’m right here, you know. You could ask me.” She cleared her throat. “I may not look it, but I *am* the lead researcher on soul composition.” She gestured at Terry. “Who you have here is a middle manager, who has to take what I discover, and break it down for a kindergartener to understand, or more practically, for head management to understand.” Terry opened his mouth to protest, but Julianne continued. “You’re better off getting it straight from me unless you want a kindergartener’s understanding of this.”

Mark picked up a rock and threw it down the hill, behind them. It hit a tree with a satisfying *clunk*. Brianna grabbed his wrist and scolded him.

“Alright, I’ll bite.” Chris hiked the strap on his bag further up his shoulder. “What are souls made of?”

“Solid, compressed space.”

“Come again?”

“Souls are made out of solid, compressed space. As in, they’re made up of space, instead of matter that inhabits space. They’re non-atomic and completely continuous throughout. You see, souls are 4-dimensional in their natural state. So what we do is compress a region of space just enough to hold a physical and *real* portion of the soul in our three dimensions. If we didn’t compress the space, we’d only see… sort of an afterimage of the soul. We would probably just phase through it. It wouldn’t have any mass.

“The soul that caused this volcano to form, however, was a special case, far outside of what we would normally see. We aren’t new at this anymore, the technology behind soul extraction and anchoring has been used for nearly a decade now. Do you know anything about the tools used for it? It’s fascinating.”

“I just wanted to know what they’re made of.” Chris shrugged, while unpacking his supplies.

“Well, to understand that, you actually *do* need to understand the tools. Unlike minerals or ores, where the type of pickaxe or drill used doesn’t significantly alter the composition of the extracted material, the tools here have everything to do with what the soul is made of. The anchor and extractor were both designed using evolutionary algorithms run for several months on the world’s fastest supercomputers. Neither of them could have been conceived by a human brain.

“The extractor is like the net thrown from a fishing trawl. By itself, it certainly can’t reel in a fish, but it can catch a fish. It works by detecting a soul’s presence near our three dimensions (but not yet within), and inverting space near that area. This inversion of space is a bit like digging a hole in a room with a lot of shallow water. Let’s say that the soul is a 1mm thick layer of water, and that our three dimensions are the layer of sand under the water. So the extractor digs up a hole, and then like water, the soul rushes in to fill that hole. We force it to intersect our dimensions by creating a void next to it, to pull it in.

“The other half of the procedure is the anchoring. The extraction is just making the soul visible, and making it intersect our dimension. What the anchoring tool does next is, it wraps layers of space around the soul that ‘leaked’ into our dimension, and then it pulls the layers tightly enough to compress the soul into a form we can interact with. A form that has mass and that we can touch. If the extractor is the fishing net, the anchor is the winch attached to that net.”

Chris blinked, and paused in setting up his easel. “So, why did this one turn into a volcano?”

“Well, I’m no geologist, but I had to study it quite a bit to explain what happened here. First, we have to discuss what exactly was different about this soul. Most souls are a few centimeters in diameter, just about halfway between the size of a baseball and a softball. They almost always weigh about a kilogram.”

“That’s quite a bit heavier than a softball.” Chris was folding out the legs from his easel.

“Yes, it is. They vary in size, though. As far as average density goes, most of them are just a little denser than aluminum. But it skews quite far in either direction. Some souls float on water. Some will float in air, too. But those are very rare. We’ve only retrieved a few of those, out of the thousands we’ve had available to study so far. This soul, though, was a very peculiar example. Though most souls are the size of a softball, and some can be quite a bit larger, this soul was the size of a single grain of sand.”

Chris continued setting up his easel, raising the clamp so he could set the canvas under it. After a few seconds in thought, he said “So you’re telling me, a soul that was the size of a grain of sand caused this huge volcano to form? How exactly did it do that?”

“To be honest, we don’t know it was the size of a grain of sand. That was calculated from the immense heat it put out.”

“How did you calculate the size from the heat?”

“To put it simply, the density of a soul determines how much heat it puts out. Any heat it puts out is in the form of infrared.”

Julianne was standing near the easel, leaning slightly on an old wooden cane. Mark was taking pictures of the volcano with his phone, next to Brianna, who had stretched out on a blanket, basking in the warm sunshine. Terry was sitting on a rock, staring out across the vast valley. Chris had finished setting up his easel, and had clamped in the canvas.

Julianne shifted her weight from one foot to the other. “You can think of it like this. We’ve had a while to puzzle it out, and we’ve determined that the infrared from the soul is the result of vibrations from the compressed space used to comprise that soul. When a soul is extracted from its body, it lets out a deep groan at first. The anchoring procedure cancels out this groan, but from what we’ve observed, the physical vibrations which cause the groan are skewed into electromagnetic vibrations, which are detected in the infrared spectrum.

“Souls which are smaller can be thought of as more compressed than souls which are larger. This compression results in intense vibrations from the soul. While the frequency of these vibrations doesn’t vary, in souls which are *very* compressed, the waves reach insanely high peaks. This is understood as more photons released per minute at the same energy. This is a constant release of energy, distinct from an object being simply hot or cold. We have tried to raise or lower the apparent temperature of a soul in every way known to science. But, so far, we have had no luck changing the temperature of a soul. That being the case, the apparent temperature of a soul can be understood as an unchanging attribute of that soul.

“It is for precisely this reason that the soul retrieved here was so dangerous. It came out hot, and there was no way to cool it down. It was so hot, that anything we tried to contain it with would melt. All of the recording devices on the premises at the time were destroyed. We can’t even know *how* hot it was. But, we used data from how quickly the surrounding area melted to figure out how hot it was. Our estimates ranged from 5000 to 8000 degrees Celsius. At either end of that, it’s hot enough to melt through rock, steel, tungsten carbide, anything.”

Chris had begun sketching on the canvas with a light pencil to place different elements of the view into perspective, within his painting-to-be. “Couldn’t you just, you know, put it back where it came from?”

Julianne sat down, trying to admire the view of the valley and central mountain as just a pretty sight, and not as a black mark on her pride as a scientist. “Well, if we could’ve put it back, we would’ve done so… either way, on to how that incident caused this volcano.”

**Part II:** Creation

Year: 2162 AD

The second Retrieval facility had been built to continue gathering data on souls, and to spread out the research and personnel in the case of an unthinkable catastrophe. The orientation for the job had disoriented and unnerved most of those onsite. While the practice of soul retrieval had been deemed, in general, safe enough to perform without requiring hazmat suits or evacuation (though ear protection was added to the list of equipment, immediately after the first procedure was completed), the well-known mathematical models predicted occasional outliers at the upper and lower bounds for size, which of course implied outliers for density, which implied outliers for temperature. It was not the asymptotic outliers for mass which worried these technicians, but the very real possibility of the eventual discovery of a soul too dense and too hot to contain safely.

However, the reality of working at the facility was, in the five years it had been up and running, there wasn’t a single incident. That is to say, there were no cases of an injury or a soul unfit for containment in the several years the facility had been up and running. Today there had been five retrievals scheduled, two of which had already been completed.

The first sources for retrieved souls had been volunteers, those who were already on the brink of death and wanted to make a contribution to science before their time came. More recently, it was used as an option for inmates facing the death penalty. Those who chose this method of execution were not warned that, according to every last example of the procedure in practice, it appeared to be excruciatingly painful.

The third retrieval for the day was a volunteer. Not a murderer, nor a rapist, nor a drug dealer, nor a cult leader. This volunteer was a perfectly average man of eighty years, who had decided to give his family his soul as a parting gift, rather than undergoing cremation and giving them his ashes. Speaking from an omniscient perspective, as this must be made *completely* clear, he had no dark secret life as a criminal or mobster, nor did he moonlight as a serial killer. It is important to understand that this was a completely normal man, because of what happened to his soul. Or, more accurately, because of what his soul did to the second facility.

What follows is a description of a video stream broadcast by the second facility to the first, up to the point of soul retrieval, until the broadcast ceases.

The patient lay under heavy anesthesia, surrounded by the surgical team. The head surgeon spoke. “Extraction is starting. Clear.”

The tool is brought in close to the incision. “Contact initiated, drawing it in.”

An orb manifested over the body, the groan drowning out and saturating the audio from the tape. A burst of static punctuated the interjections from the surgical team. “Contact successful, bring up the anchor.”

The machine was rolled into the room, and the hood draped over the soul. “I am switching the anchor on. Clear?” The operator looked at the head surgeon for approval.

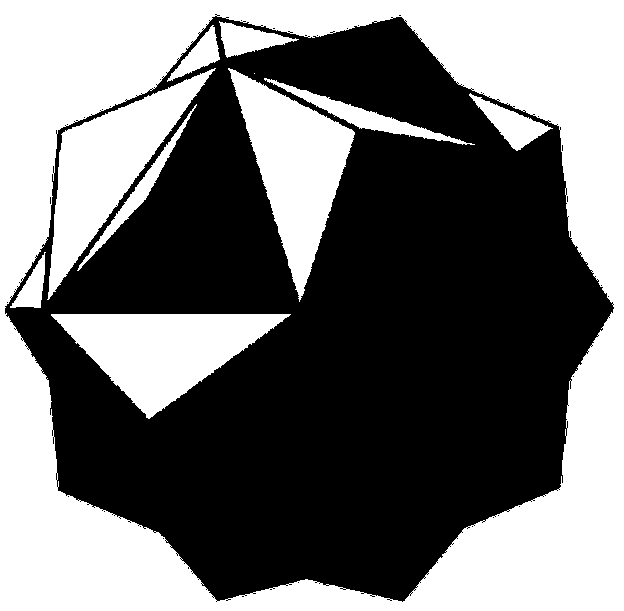
“Clear.” The head surgeon gestured at the operator. “Proceed.”

The operator switched on the machine. The groan intensified, before quieting down again. “Doctor, there’s an anomaly in the temperature. It’s rising above 200 Celsius.”

“That’s within controllable range. Bring up the high-temp enclosure, then.”

The operator visibly frowned, but brought up the enclosure from within the anchoring machine. At this point in the video, a high pitched and repetitive beeping noise emanated from the anchoring machine.

The operator spoke. “I’m seeing a delta of 100 centigrade every couple seconds. If this continues, the enclosure will not hold.”

“Steady, this isn’t the-” here, the enclosure loudly shattered. The hood normally hiding the anchoring process burned away, revealing what was behind it. The soul, initially perfectly round and red, and of normal size, had collapsed into a speck visible only as a black dot on the video feed. The editor of the presented video switched, here, to a secondary camera angle much closer to the soul. It was a small, pitch black, triambic icosahedron.

“Hot! It’s too hot!”

Space folded around the soul, floating above the body, which was burning and charred black, dead since contact was finished, mercifully spared from the intolerable heat now engulfing the room.

The head surgeon wiped his forehead with a swab. “Can you use the space folding function of the anchor to contain this heat? It’s getting too hot.”

The operator wiped his own forehead. “I can *see* that, Doctor! I can’t contain this much heat with space-folding alone! We may need to evacuate!”

The head surgeon did not respond, apparently enraptured by the dancing folds of space engulfing the soul. “It’s… Beau…” The head surgeon collapsed, succumbing to heat exhaustion.

The assistant head surgeon took over immediately. “We need to get out of here! Grab the head surgeon! Don’t look at the soul!” He glanced at the operator. “Turn off the anchoring machine, we can’t have it getting any-” at this point the assistant head surgeon noticed that the operator, too, had collapsed. The soul began to descend, not simply falling from midair, but descending at a constant rate. It bored through the charred-black body of the soul’s owner, and the table underneath it, with equally little difficulty. The air around it glowed as it sunk into the floor, melting the tiles as it went.

At this point, everyone who had been in the surgical room at the beginning of the procedure has collapsed. The floor under the operating table began to melt, and the objects on the floor began to roll toward the drooping center of the room before falling through completely. The anchor, the tool cart, the table, the lamps, the bodies of the surgical team, and the soul all descended together to the floor below. Here, retrieved remote security camera footage takes over the broadcast. Several people on the floor below were killed instantly by the blast of heat from above. Two more were crushed under the anchoring tool, still hanging from the descending soul, still plugged in, miraculously still functioning. The rate of descent of the soul continued accelerating. Several people in the room burst into flames while attempting to flee.

The descent continued, with the soul gaining a brilliant white aura as it moved to the next floor, now moving at 1 m/s, as a helpful measurement of the current speed of the soul added to the footage after the event indicated. It was glowing quite brightly now, enough so that every person on the next floor down burst into flames immediately upon entry from the floor above. At this point the fire alarms went off, and the sprinklers uselessly kicked into action, instantly filling the room with a heavy burst of steam. This blast of steam descended into the next room, scalding all of those below. The addition of water to their skin prolonged their lives slightly, but soon enough they, too, burst into flame. The size of the hole between the previous floor and the current floor was very nearly the width of the room. The security cameras, now, melted beyond function just as the soul reached the floor they were on. The speed of the soul had reached 2 m/s, its anchoring getting closer and closer to completion, and with it, its temperature rose, and the degree to which it was influenced by the laws of this dimension (such as gravity) rose.

At this point, entire floors began melting before the soul even reached them. The camera the point of view was taken from was now two full floors ahead of the soul at all times, indicated by a number next to the soul’s descent speed. This continued until the basement floor warehouse was reached, already a burning mess, but as the ceiling of the ground floor was quite high, and the storage basement somewhat cavernous, the camera was able to operate here for significantly longer than the floors above due to the large mass of air between it and the soul.

In the three seconds before it melted, a set of rings formed around the soul, what appeared to be a shaft of light stretched downward from the soul and melted the floor between it and the ground, and finally the anchoring machine melted and ceased functioning. The moment the anchoring tool melted, the final security camera shut off.

At this point the feed was continued with uploaded footage from observers with mobile phones, recording the burning facility from far away, from the windows of trains passing the area, from bus windows on the freeway nearby, from the evacuation helicopters near the facility. There was, at any time, at least one camera trained on the spot with a clear view. The research foundation placed a set of cameras near the area to record the spot where the soul had descended into the earth. It became the most watched location in the country, with a live broadcast of the event streamed publicly.

The stream was sped up several thousand times, now. The steel frame of the facility sagged, and eventually was swallowed whole by the Earth. This was followed by an ever-widening sinkhole, filled with magma. The magma cooled, and solidified, but was soon pushed upward, as smoke flooded out from a hole in the center. The mound grew, and at this point the camera began shaking violently, exacerbated by the speedup.

The perspective was, then, switched to a camera placed much further away. It was zoomed in to approximate the previous framing, and the speedup resumed. The mound resumed its growth, until it reached nearly its current height, at which point magma flooded down the sides of the mountain to devastate what was left of the city below. The entire area around the volcano was sinking as this was happening, until the area reached the current shape and the eruption ceased.

“Holy shit.” Chris said, after the video finished. “You work with stuff like *this* on a *daily basis*?”

Julianne sighed. “No, honestly. Most of them aren’t anything like what was in the video. In fact, the mathematical models predict that souls like the one you saw here only happen very rarely. Like one in a few hundred million. We just got really, *really*, unlucky.”

“Jesus, I’d say.” Chris resumed his painting. “What are most of them like?”

Julianne put down her bag and pulled out an orb which fit nicely in the hand. “Most of them are like this.”

Chris jumped back instinctively, nearly knocking the canvas from his easel. “Shit! You *brought* one!?”

She looked at the soul, and back up to Chris, a grin crossing her face. “I think it likes you. Here it comes!” She tossed it at Chris with no warning whatsoever. Chris instinctively caught it, and immediately dropped it.

“What… It’s…?”

“Most of them are like this, except for a few major differences. This is the theoretical perfect size and shape for a soul. It is a nearly perfect sphere.”

“But why is it so light? And… so cold?”

Julianne smiled. “That’s what’s special about this one. It’s lighter than a normal soul, which makes it less dense, which makes it colder. This one has an apparent average temperature of 15 Celsius. Its mass is 450 grams.”

“I thought you said the mass was almost always a kilogram, though. How can this one be less than half that?” Chris picked up the soul. “Not a scratch…”

“I’d expect there to be no scratches. It’s absolutely indestructible. You could put it in a hydraulic press, and the press would break before it did. As for why it’s so light, there are variations to the weight. This one was actually given to me as a joke, since it supposedly proved my models wrong. But I disagree. I think it’s more like…” She looked out at the volcano again, slightly more at ease now. “More like an example that, sometimes, things are just beyond our control.”

**Chapter Six**

A Lie

Year: 2167 AD

It had become customary in the research facility to kneel in the presence of the Director. At first, it was done as a joke, due to the impossibly high-and-mighty attitude the director displayed in meetings and when discussing plans for the future of their research. But as the years wore on, as salaries and resumes grew, as benefits packages became more extensive, as requested overtime decreased, as certain researchers were lauded as heroes in their local communities, the kneeling became a sincere display of respect.

In the eyes of the researchers, the Director had singlehandedly manipulated the public perception of soul research from one of mad science, with crazed pursuers of truth blatantly disregarding basic human rights; to one of legitimate, benevolent testing, conducted to better mankind. The pivotal shift was when souls that were hot enough to boil water (forever) were put into use as free energy devices. No fuel, no emissions, no nuclear waste, no bird strikes, no brownouts when the sun goes away, no salmon endangerment, no random fires a block from the receiving dish when a targeting error occurs, and no triggering earthquakes.

After the firebrand Richard MacMillan gave his nomination speech a decade ago, lambasting the field of soul extraction as one of defiance against god’s will, and advocating for the shutting out of those who had received gene-based treatments, the Director stood up against him. The Director challenged Richard MacMillan to a public debate on the subjects touched upon in his speech. Richard, after initially ignoring the challenge, accepted due to pressure from his supporters. He retired his candidacy less than twelve hours after the conclusion of the debate.

There was widespread panic around soul extraction, after the volcano incident which displaced millions from their homes, but the Director managed to calm all of these concerns down. There was a common rumor which circulated in workplaces, taverns, schools, and homes. This rumor was that the souls could randomly heat up, destroying everything around for kilometers, killing millions. It was exacerbated by rampant theories on the internet surrounding the now-infamous video of the incident. These were theories that the soul wasn’t hot at first, but got hot later, and even the operator and surgeons weren’t expecting it.

The director’s response to this was calm and collected. He delivered a speech explaining what an anchoring tool was, and that once it was switched off, the soul would remain in its final state forever, completely immutable. He further explained that in all cases, even if the anchoring tool was not switched off, the soul was always pulled out of the anchoring field by gravity once it was completely within our dimension. He explained further that, even in the event of a soul being artificially held up against the anchoring field after it had finished manifesting, the solidity of a soul once it had finished manifesting caused it, always, to cease being affected by space folding immediately afterward, no matter how long the anchoring machine was left on. To drive home his point, while delivering this speech, he held an average soul inside of the anchoring field, with the curtain opened to show that there were no tricks being played.

Perhaps the most important thing the Director did to drive home the point of soul retrieval being an inherently humane and admirable act was to imply (soon after his crushing debate victory over Richard MacMillan drew the attention of hardcore religious families) that retrieving a soul from a loved one would not prevent them from going to heaven. On the contrary, the soul is separate from the spirit. The soul is an immutable aspect of that specific individual *on earth*. Their spirit may travel freely from earth to heaven, as it is the aspect of humanity which is connected with God.

Through a clandestine, vast network of preachers and churchgoers, the opinion of the religious majority was swayed towards support of retrieving souls as a way of honoring family elders or important community figures such as principals, mayors, and business owners. For those whose “soul was really in their work”, it became common practice to extract their souls near death and place them on display at the places of work.

As this cultural practice had only been in place for five years, most places only had one soul on display. But the intent was for each successive mayor or business owner or preacher or principal to have their successive souls on display in roughly the same area. The news that was brought to the Director today was quite troubling.

“Master Director, sir, may I speak with you for a moment?”

The Director said nothing, and waved Terry in.

Terry entered and knelt, as all in his presence were expected to do.

“Speak.” The Director’s voice was of medium timbre, with an unshakable self-confidence and righteousness.

Terry began, “The fusion test was conducted today, to determine the reactivity of souls when exposed to each other. I have the results here. Do you have time to listen?”

The director stood up and walked around his desk to face Terry directly. He was not all that tall, standing at 167 cm. His physical presence was meek, yet solid. He wore a full, red beard on his face. “Please, go on. I need to know about this. This is important.”

Terry rose from his kneel. “Shall we sit down? There’s a bit to go through.” He gestured at a table with a few chairs around it by the wall. “Is over there okay?”

“Over there is perfect. Let’s sit.” They walked across the room to the table, nervousness rising in Terry’s chest. He’d never spoken to the Director before, usually *his* boss did that, but his boss was out sick and this report couldn’t wait for him to return. “So, you’re Terry?” The Director took his seat. “I don’t believe we’ve met. My name is Francis Roberts. Yours?”

Terry swallowed. “I’m Terrence Gallo. I report to Jimmy Lake.”

“Ah. Mister Lake is a good guy. You like working for him?” Francis smiled.

Terry returned the smile. The rumors that the Director was some sort of elder god of anger seemed overstated. By all accounts, he seemed like a nice guy. “Yeah, he treats us well. So, shall we go over the results, then?”

“Of course.” He spread out his hands on the table. “Let’s see them.”

Terry pulled out the locked briefcase, unlocked it with a key, set the combination locks to their correct codes, scanned his thumb on the fingerprint scanner, then his left middle finger, then he scanned his eye with the retinal scanner, then he said “Pennies today, oceans of gold tomorrow”, and the suitcase clicked open. Upon pulling it open, a keypad swung out of the side, with a message appearing on the screen above it. “3 SECONDS TO ENTER PIN” Terry entered it just as the countdown reached 2. The sparkplugs and aerosol sprayers which would have incinerated the contents of the briefcase retreated into the thick, armored walls of the case. “Sorry that takes so long.”

Francis leaned forward, peering into the case. “You think they put enough security features into these things?” He and Terry chuckled slightly. Terry felt relaxed, now.

“So, our testing has uncovered a worrying propensity towards explosive energy releases, following interactions between soul cores.” Terry passed a few pages from the case to Francis.

“Why do you say worrying?” Francis had begun reading through the files. “What’s worrying about it doing something? I’d be more worried about it not doing something.”

Terry now understood how his earlier dismissive attitude towards Julianne’s work felt. “It’s worrying because the amount of energy released is similar to a bomb going off. The first test had a death toll of 140 technicians and researchers, with the remaining 257 technicians and researchers onsite at the time sustaining minor to severe internal injuries, depending on their proximity to the fusion site at the time.”

Francis stared at the table for a while. “This table is solid mahogany. Its curves and details were worked in, by hand, by a skilled artisan.”

Terry had been about to continue relating the results of the test, but he stopped mid-thought. “Apologies, but… What?”

Francis smiled, tracing a finger along the hand-carved surface. “You know, the tree that was brought down to make this table, and this entire thing is a solid, continuous piece of wood, by the way… There were probably hundreds of birds and other animals which were brought down with the tree. Not to mention all the worms and bugs living among the roots, and even that still fails to mention the billions and billions of bacteria and other microfauna dependent on the ecosystem contained within and around this tree. It was a huge old beast, a real one-in-a-million specimen.”

Terry was torn between calling Francis out, or keeping his composure (and his job). Eventually, he said “I beg your pardon, sir, but I’ve just informed you that one hundred and forty people who worked for us were killed in an industrial accident.”

Francis met Terry’s gaze with unexpected ferocity, almost leaping to his feet. “Every last *one* of those birds and animals *needed* to die for this table to come into being.” Francis rose to his feet. “The work we are doing is set to reshape humanity as we know it, Terry. We are not simply doing research, here. We aren’t just plugging numbers into computers and watching to see how close to being right we were. We’re not just ripping souls from human bodies to keep them in glass jars like a young girl decorating her room with pretty rocks she found. And we *sure* as *fuck* aren’t going to miss the opportunity to drive our knowledge forward because we’ve learned it *might* be dangerous! What we are doing here is reinventing human civilization. Space-folding. Free energy. *Immortality*! The questions of *what we are* and *why* ***anything*** *exists*!

“Every last *one* of these new technologies is because of *our* research. We aren’t just conducting studies. We are *at war* with the future of our society, and it is a war I intend to *win*! It is a war I intend to win, *so hard*, that all futures save for the one we’re working towards simply evaporate!” Francis was spitting at Terry for the last few sentences. A thin line of saliva trailed from his lower lip. His blue eyes were bulging from their sockets, his face nearly as red as his beard.

Terry was trembling. “I understand, sir.”

Almost as quickly as to be comical, Francis regained his earlier composure. “Of course you do, Terry. You understand because you’re smart. You understand that wars have casualties, but you also understand that these deaths and injuries are not in vain.” Terry stared straight ahead, never again to attempt to call Francis out. “I have some ideas about how we can use this, Terry. Give me a high-level overview of your findings.”

“Right, so we have here a reaction with an energy level of roughly 14 tons of TNT. The explosion produced an airblast coupled with heat and light, followed by a significant burst of gamma radiation. The result was the complete destruction of half of Retrieval Facility 5, the aforementioned loss of personnel, and the other half of the building was rendered structurally unsound. The entire place will need to be rebuilt from scratch.”

Francis had folded his arms and was leaning back in his chair. “So, the blast yield. Do we have any models to predict whether this was a big one? A little one? Do we know anything about what causes a blast yield to be big or small? Also, what of the actual fusion process? Do they just have to touch or does something else happen?”

Terry spread a few more papers out on the table, and picked one up. “So, it is the first of its kind, and we have no other event to base our assumptions of whether this was a big explosion or a small one. As for what causes the fusion, it looks like there’s a region within the surface of the souls which can be considered to be the ‘core’ of the soul. The region of the soul outside of that core, though it will not pass through matter, will freely pass through other souls. So, the souls must overlap by a significant amount before fusion will occur.”

Francis nodded. “So, is this the sort of thing that you suppose someone could do by accident?” He stood up. “I’m going to make myself a coffee. Would you like one? How do you take yours?”

Terry raised his eyebrows. “Oh. Uh, black, please.” Francis stood up and started walking across the room to the table on the other side, passing his desk on the way. Terry took the opportunity to wipe his face off on his sleeve. “So”, Terry continued, “from what we observed before the event took place, no. We don’t think it would be very easy to cause this to happen by accident. There is a very slight repulsive effect when the cores get close, enough to make it difficult to line up the cores unless that is what you intend to do. Worth noting, the cores are not always located in the geometric center of the soul. So unless you were screwing around with them for a while, it’s pretty unlikely.”

Francis had crossed the room and pressed the button on the antique coffee-maker. “You think so?” He looked at the coffee maker and frowned. “You ever see one of these things before? They’re supposed to make a much stronger cup of coffee than today’s brewers, but I haven’t noticed a difference. They call this thing a *Kurag*. Maybe I’m pronouncing that wrong.” He looked over at Terry, as if for confirmation. Terry shrugged. “Anyway, do you suppose we should start a PR campaign to prevent people from accidentally initiating a fusion?”

Terry cleared his throat. “I don’t know if I’d have any useful input on that, it’s a bit outside of my area of expertise.” The first cup was filled, the second sitting on the platform below the nozzle.

Francis threw his hands up in a mock display of impatience. “Just wing it!”

Terry looked down at his papers for a moment before speaking. “Yes, I suppose we should. Did you have something in mind?”

Francis grinned, and sipped his coffee. “Yeah, I’ve got an idea.” He took another sip, and set his mug down with a *clink*. “People don’t know how our process works, right? All we need to do is tell them that if they do it, it’ll create a wormhole and suck them in, and *poof*, dead. It isn’t far from the truth, since fusing souls together would *definitely* kill them, but it’s not such a drastic warning that it would prevent people from getting our services.”

Terry wasn’t convinced, but he didn’t have any better ideas.

**Chapter Seven**

The Homeland

Year: 2172 AD

Todd, a small boy of about four years, was rolling his late uncle’s soul across the kitchen floor. A reddish oblong, it was only slightly warm to the touch, but it rolled nicely, if a bit wobbly. The soul hit a wall, and spun a bit. Todd crawled over to the soul and began spinning it on the floor. He then looked up at the mantle, where his late aunt’s soul, a large, light red warped tetrahedral shape, with distinct corners, sat with its point down in its brass stand. Todd felt the inexplicable urge to take it down from the mantle, but was prevented from easily doing so by the height of the mantle above the floor.

To circumvent this obstacle, Todd pushed a small footrest across the living room in order to stand on top of it and reach the mantle. The oblong soul sat on the floor, against a recliner. Todd climbed up onto the footrest and was able to reach the soul. It was much colder to the touch than the oblong, and so Todd immediately dropped it on the floor, making a noticeable racket.

At this, Todd’s mother, a perpetually exhausted woman of some thirty years, entered the room, rubbing her eyes. “Toddie, what are you getting into now…” A weary scan of the room turned up one object out of place. “Todd, I told you, no playing with Uncle Edgar’s soul, it’s not *nice*. He likes to stay up here…” She, exhausted, picked up the soul, intending to bring it to the mantle. However, the upturned point on the Aunt’s soul (on the floor in front of the mantle, unseen next to the footrest) impaled her foot cleanly as she put her foot down on top of it, resulting in a knee-jerk reaction of dropping her brother’s soul and raising her foot to grab it as she shrieked in pain. The reddish oblong fell, rotating in midair, directly above the tetrahedron.

Todd, though young, felt a primal fear. He reached forward, almost but not quite catching his uncle’s soul, which now spun slightly faster as it continued its descent. It hit the floor, phasing cleanly through the aunt’s soul, bounced, spun slightly, and resumed its descent… at which point the cores of each soul happened to line up.

A burst of brilliant white light filled the room, followed immediately by the forging of the two contacted souls morphing into a perfect black sphere and shrinking to a single point in space, slightly above the floor, and filling the room with further rapid pulses of light.

By this point, both Todd and his mother were very, very dead.

Then, the airblast followed. An incredibly high-pressure wave of air radiated out from the point of contact, shredding all matter in its path and blowing the second floor of the house far into the sky. The jolt jerked Todd’s father awake. His bedroom (in shambles) appeared to be wrong, somehow. He realized his bed was sitting on the wall. He got out of the bed, and looked down at the window (which was now by his feet as he stood on the wall). The ground was already some fifteen kilometers away, and it was becoming extremely cold, and each breath became harder and harder to take. He shrugged and returned to bed, where he died on impact upon the second floor’s return to the ground, some twenty kilometers away.

Back on the ground, the fused soul itself seemed to leap into the sky, propelled there by the sheer force of its own explosive energy. The singular point in space again began to expand, returning with far greater mass. To be precise, its mass reached 4,933 kilograms, or 4.933 metric tons. Despite this, it was still only 5.3 cm in diameter. To be more precise, it was exactly 5.27162716 cm (repeating) wide. This gave it a density of 64.30 kg/cm3. To contrast, the “hellsoul” at the earth’s core had a density of 76.23 kg/cm3. However, one important thing must be considered. This soul was nearly 4,000 times the size, and 5,000 times the mass, and it was currently entering the troposphere, having gained an incredible amount of momentum through its mass increase as it flew upward.

It reached its highest point at roughly 245 kilometers above the earth’s surface. For reference, Sputnik’s orbit took it as close as 215 kilometers to the earth’s surface. However, it did not have the massive lateral velocity that Sputnik had. It, slowly, began to descend once again. By this time, about three minutes later emergency crews had been notified, and were rushing to the area it had launched from, from fifteen kilometers away, outside of the zone which had already been destroyed in the shockwave. It came down on the outskirts of a city near the middle of the continent, some 800 kilometers west, with a terrifying amount of momentum. So much, in fact, that its kinetic energy upon landing, *alone,* carried with it the destructive energy of almost exactly five tons of TNT.

That was just the *kinetic* energy. It wasn’t done putting out heat. Unlike a normal soul, which puts out relatively harmless infrared radiation (though it can be quite harmful if there is enough of it), this soul put out high-energy gamma radiation, so much of it in fact, that the ground began to melt before it even landed. The magma splashed upward with near-biblical force, sending a wave of molten rock outward from the point of impact, dousing the neighboring city with a sheet of blistering terror, and sending the wave of ground-melt out nearly as quickly as that initial wave. The people of the city didn’t even have time to panic. All, for dozens of kilometers, were killed instantly by the intense radiation.

Francis slammed the phone down, nearly breaking the receiver. The estimated instant death toll from the fusion event was 17,450,000 people. There would be no covering this up. That wasn’t even the worst of it. Every second, the radiation from the fused soul killed another 5,000 people. It had to be ejected from the planet, and soon. Every day that passed without the removal of this soul, another 432,000,000 people would die. This was completely unacceptable.

Francis addressed the board of directors from his seat at the head of the table. “We need to get this thing into space, and it needs to be there *yesterday*. I know we have the resources, the people, the know-how, and the money to get this done. So, first order of business, how are we gonna retrieve it?”

Jimmy spoke up. “During our tests at Facility Five, we discovered that there was a point of light at the epicenter of the fusion event which remains behind, as the mass-carrying portion of the soul is temporarily not in our dimension. The fusion event overcharges it-”

Francis slammed his hands on the table. “*Jimmy! Millions of people are dying! Explain later!* ***WHAT DO WE DO?***”

Jimmy took a moment (but only one) to calm himself down. “You launch the point of light into space and it’ll apply the same motion to the fused soul. It’ll get dragged into space too.”

“Is it safe?”

“Safe enough.”

“Make it happen.”

Mark lay in bed, sick from the radiation poisoning. His father, Chris, had already passed away. Brianna was at Mark’s side, crying softly into the hospital bed sheet. Mark tried to console her, but was failing to do so. He looked, forlorn, at the painting hanging on the wall by his bed: a beautifully rendered oil painting of a volcano, seeming to stretch into the sky.

“That was a beautiful place, Mom.”

Brianna sniffed, wiped away a tear with a fold from the sheet, and looked up at him. “What was, Mark?” Her voice quivered.

“That volcano. The place in Dad’s painting. It was nice.”

Brianna forced a smile. “Yes. Yes! It was.” She grabbed his hand. “It was, Mark.”

“When I get better, can we go there again?”

Brianna said nothing, but continued to smile. Pain filled her eyes, but she held back her tears.

Mark turned to look out the window.

The sun shined down with perfect indifference.

**Chapter Eight**

Black

Year: 2172 AD.

The wake for Chris and his son was a quaint affair by necessity, as the event which killed them killed countless others. Mark chose not to have his soul extracted, instead opting for a traditional burial. As Chris was killed much more quickly, he was spared the burden of choosing. Julianne, Terry, and Brianna (herself suffering from severe radiation poisoning) sat solemnly in mourning. With them were Brianna’s older brother Nate (the 2nd), their mother, Kaitlyn, her husband, Oliver, Oliver’s niece, Amy, Amy’s sister, Tulip, Tulip’s father, Rocky, and so on and so forth, altogether two-hundred fifty seven people attending the funeral, all of whom knew either Chris, or Mark, or knew someone who knew one of them, or someone who knew one of the other twenty-five people the funeral service was being held to mourn, or someone who got lost and attended the wrong funeral instead of the one down the street.

Unsteady on her feet, she was helped up by Terry and Julianne as she made her way to the podium. She gripped the podium with one hand, and rubbed her head with the other. “I’d like to start by saying that my husband and my son were both great men. Chris was always there for me, no matter how bad things got, with a tissue and a smile. I never had to worry about being alone, and he brought so much love into my life. Mark was my kind young man of a son, and he was making so many friends at college, and he was getting such good grades, and I was so proud of him for being so strong and mature and bright. He was my light, and Chris was my foundation. I… I.” She seized up and collapsed, shrieking and clutching her head, banging her free hand on the floor. She was eventually dragged away from the podium to make room for the next speaker, and the line of speakers inched forward by one.

“I’m quitting.” Terry placed his badge on the table. He turned to leave the room.

“Come on, Terr, don’t joke around like this.” Jimmy picked up the badge and held it out, expecting Terry to take it.

Terry clenched his fists at his sides and turned around, to walk back to the table. “I lost half of my family in that event. I can’t contribute to this place anymore. Not only for personal reasons, but honestly, I don’t think I’m going to be in the right state of mind to produce quality work for quite a long time.”

“You’ll come back, right?”

“If you invent a way to bring my family back to me, sure I’ll be back. But not before then.” Terry turned back to face the doorway, and strode out, head down, hands in his pockets. “Bye, Jimmy.”

“Good night, Terry.”

The surgeon looked across the table at Brianna, who had begun to lose her hair, and who was accompanied by her brother, Nate. She had asked Nate to come along because she was scared of going by herself, but she didn’t have anyone else who could go with her. He looked down at the file. “You know, we’ve actually received *quite* a lot of requests like this one.”

Nate sat back in his chair. “I’m not surprised, that event affected millions of people.” He glanced over at Brianna before returning his level gaze to the surgeon. “So, Hank.” He paused for a moment and took a breath. “Doctor Hank. Do you recommend she undergo the mind transfer procedure? Or is gene therapy more in line with what she’s had happen to her?”

Hank looked down at the papers on his desk. “Brianna, you wouldn’t happen to be related to a man by the name of Boris, would you?”

Brianna and Nate both looked up at that name. “Yes,” Brianna began, slowly, “he is our great-grandfather, but he died before we were born.” She frowned, recalling the story related to her by her grandfather, Terry. “He… He died decades before Nate was born. I don’t like to think about that story. But it happened eighty years ago.” She looked at the surgeon, eyes mostly vacant. “Surely, you’ve improved the procedure since *eighty* years ago. Why, that’s nearly a century!”

The surgeon put down the papers. “Well, judging by the extent of the radiation damage to your cognitive faculties, gene therapy could take several years to regenerate the dead tissues. Additionally, we would still require extensive surgeries to remove the portions to be regenerated. There is a large risk of memory loss, or reversion to an earlier mental state. The procedure would be quite invasive. Therefore, I cannot recommend gene therapy as a standalone treatment. However, we have been using a relatively new procedure. We can take the brain out and *temporarily* replace it with a computer brain. The brain is then regenerated using cutting-edge reconstruction techniques and gene therapy regeneration, to ensure no memories are lost. Then, once the brain is finished growing back, the computer replacement is removed, and any new memories and experiences written to the replacement are reverse-transferred into the brain, allowing it to be transplanted back into the body, avoiding the long-term negative consequences of either procedure by itself. That being said, the cost of this procedure…” He trailed off.

“We have money.” Nate spoke. “Our grandfather, Terrence Gallo, is a top researcher at Soul Retrieve. He’s been there since before the first soul. He has money.”

“You told him *what*?” Terry all but screamed into the phone.

“You have money, right?” Nate folded his arms and leaned on the wall in his kitchen. “You’ve been working there for, what, fifty years now? No *way* do you not have the money for this.”

Nate heard the distinct sound of Terry’s breathing on the other line, hard and heavy breathing. He would only breathe like this if he were completely enraged. “Nate, you’re a fantastic grandson, and your sister Brianna is such a sweetheart, but… Alright, you can’t tell anyone about this. I quit my job at the facility.”

“You *what*?” Now it was Nate’s turn to nearly scream into the phone. “Why would you do that? Soul Retrieve has the world in the palm of its hand! You had authority on par with world leaders!”

“Okay, no. I was a middle manager. I made a pretty comfortable living there, but first of all, I’m *not* loaded. What I have now is my *retirement* fund. Second of all, that event, *which killed Brianna’s husband and child*, was blamed squarely on Soul Retrieve for irresponsibly flooding the world with these things, which, *by the way*, we don’t know *nearly* as well as everyone seems to assume.”

Nate was beginning to feel like a child who had just broken his sister’s toy during a tantrum, and who was receiving a stern lecture for it. “Grandpa, I-”

“Thirdly, this procedure you want your sister to go through is exactly what caused my father to lose his mind. He was alright for a while, but eventually he just *completely* lost it. I’m not going to watch the same thing happen to Brianna. This event took away *twenty-five* of my family members. It doesn’t need to take away twenty-six.”

“Alright. I understand. Sorry to bother you.” Nate hung up without waiting for Terry to respond. He could fund the procedure himself. His insurance, as a state worker, was pretty good. He could temporarily list his sister as a dependent. If her brain was allowed to continue deteriorating, she would eventually be unable to take care of herself. She had no immediate family other than him, now. She had no one but her big brother now. He had to protect his baby sister. He had to make her better.

He handed the paper across the table to Hank with his signature freshly written. “That should take care of it.” He grinned at Brianna. “You’re gonna get better.”

Brianna managed a weak smile. “Why are you doing all this, Nate? You’ve got your own family to worry about...”

Nate interrupted, “Brianna, you *are* my family. Of course I’m gonna look out for you.”

“But Boris-”

“Boris died eighty years ago, remember? What happened to him won’t happen to you. That’s ancient history.”

Brianna, constantly weary and hazy from the brain damage and constant stream of pain medications, could only smile in response.

Eighty years is quite a long time. Eighty years passed between the American Civil War and the bombings of Hiroshima and Nagasaki. Eighty years passed between the first man on the moon and the first man on Mars. Eighty years can easily span four generations of a family. Eighty years is long enough to forget.

A grassy plain stretched out seemingly forever, punctuated by small rolling hills near the horizon here and there, dotted with gently waving saplings, swaying in a gentle, temperate breeze. The entity attempted to romp through the plains in joy, relishing its freedom, but it found that it could not move. It could not smell the air. It could not even breathe. It could only think, and from there, it could only imagine, and inside its imagination, it could do anything. Inside of its own dream, the entity living inside of the internet blinked, and opened its maw to speak.

Nate jolted awake, drenched in sweat. He’d already forgotten his dream. His wife drowsily sat up next to him to instinctively pat him reassuringly on the shoulder, but found his shoulder to be quite damp. “Go wash off or something, you’re dripping sweat all over the bed.” She lay back down and was almost immediately back asleep.

Nate muttered, “I love you too.”

**Chapter Nine**

White

Year: 2172 AD

“I can continue my research, right? I’m not going to continue working here if I can’t continue my research.” Julianne, arms folded, tapping a finger against her arm, stared levelly ahead at Jimmy.

“Of course, your research is extremely valuable to the company. The only difference is, you’ll report to me instead of Terry from here on out.”

Julianne’s face had tightened up significantly since she’d begun the therapy. While before she looked as though she were constantly on the verge of death, she now had the face of a woman of 50 years. It had been roughly 20 years since she agreed to beginning the gene therapy, and in that time much of the aging damage to her skin, bones, and mind had been reverted. Her hair, white before, had reverted to its original black color, which she currently wore in a single braid. “I went against my principles once, already, to continue working here. I’m 110 years old, you know, and I’d be dead by now if not for my love of my work. I went against them again when I decided to stay after my cousin, Terry… Do you know him, by the way?”

Jimmy was caught off-guard. “Of course I-”

“He lost his step-grandson, his great-grandson, very nearly lost his grand-daughter? He lost one of his nephews…? Does all that ring a bell? He asked me to leave the company alongside him, and I considered it pretty heavily because his family is my family. I *chose* not to.” Her lips were pulled taught in a tense smirk.

Jimmy smiled. “And we at Soul Retrieve are very grateful for-”

She stood up and stared at Jimmy, eye to eye. “Cut the corporate bullshit and speak to me on my level. I’m no fool. My research goes above and beyond merely being *extremely valuable*. I know that the only reason this place amounted to anything is because of my research… corporate hierarchies be damned. If I chose to leave, this place would stall, and it would transform from a globe-leading research powerhouse to an empty shell, serving only eccentric requests here and there. The reason I chose to stay isn’t corporate loyalty. I’m god-damned Nikola Tesla. I’m Euler. I’m Archimedes, over here. It isn’t the money. It isn’t for recognition. It sure as hell isn’t because I appreciate your gratitude. It’s because I *love my research*. I love it like my own *child*. So either show me some *god-damned respect* for it, or *don’t bother speaking*.”

Jimmy, over the course of Julianne’s speech, had gone from enraged indignation, to unbridled frustration, to meek acceptance of the reality as presented by Julianne. “Okay.” He took a few deep breaths. “I understand, Miss Gallo, terribly sorry to bother you.” He backed out of the room, only daring to turn his back once he was at the door to Julianne’s lab, which he closed behind him.

Her three assistants, Kyle, Greg, and Mike, looked on in awe at their boss. Kyle spoke. “That was badass.”

“It was my sincere opinion of that corporate blowhard and of this company’s ethics. If being honest is badass, I guess it was. Let’s get back to the samples.”

Following the sociopolitical fallout behind the soul fusion event, the government ordered that all souls currently in private possession were to be considered precursors to weapons of mass destruction, and were to be turned in to local police stations for shipment back to Soul Retrieve for storage. This decision, Soul Retrieve becoming responsible for holding all of those souls, was the subject of much ire from the public. It sparked a string of riots from the public, with slogans such as “Human Souls, Human Rights!” and “My family is not government property!” taking the forefront in media coverage of the response.

This was responded to by the government with frequent propaganda advertisements on TV and along the sides of public transportation, on billboards by the roadways, and on the radio stations. Social media was flooded with thousands of nearly identical posts, posted from personal accounts, often without their owners’ knowledge or consent. The propaganda followed a similar theme every time it manifested. It consisted of a short video clip of the impact and lava wave, followed by footage of mass funerals and the millions of patients suffering from radiation sickness. At the end, a short, sinister message faded into view. “Do you want this to happen in your neighborhood? Be a hero. Store your souls responsibly.” This was followed with a clickable link (in the case of social media posts) which would call the local police hotline for the surrender of souls in a household. If a person clicked the link and hung up before the call completed, the police would automatically receive a warrant to search the home for any evidence of souls.

In the lab, they were conducting tests to determine the physical properties of the fused soul sample. They, and even Julianne, had initially been reluctant to accept the sample, as it was after all the same type of material as the black ball of destruction which caused the fusion disaster. This one, however, had been created in a controlled experiment, with the aim of creating one as safe to handle as an average unfused soul.

Observational data from the few dozen fusion experiments undertaken thus far showed that shape was the most significant contributor to total yielded energy from a fusion. Specifically, a shape which was further from being a sphere, such as a cube or octahedron, would contribute to a higher yield, especially if the corners were true corners (souls which resembled platonic solids but had significantly rounded corners were far more common than souls which had sharp, distinct corners). Additionally, the orientation of both souls at the point of fusion also contributed, though slightly less than the shape. For example, if two tetrahedral souls were fused, the yield would be greater if one soul was “upside-down” compared to the other at the point of fusion. Density, and consequently size and temperature, also influenced the energy yielded from the fusion, in that souls further apart from each other (such as one very hot and one very cold) would yield a greater amount of energy if fused.

This also worked in reverse. If two souls, both of which were near-perfect spheres, of the same size, density, and temperature were fused, then the yield energy and subsequent gamma ray release would be negligible. The test was nonetheless conducted in a blast-safe room; however, the energy released by the reaction was roughly equivalent to a household lightbulb flickering on.

As for the actual physical causes of these attributes contributing to the reaction energy in such a way, Julianne’s research had not yet progressed to this stage. They were still figuring out the “what” and had not yet progressed to the “why”. As for right now, the focus of their quest to learn “what” was to determine the physical properties of a fused soul, compared to an unfused soul. A fused soul had been placed in the lab’s Brinell hardness tester. It was an archaic piece of technology, but they had yet to invent a better way to figure out how hard something was than to jam a tungsten carbide point into it and measure how deep the point went. When the same test was applied to an unfused soul, the result was, of course, completely inconclusive. It had a hardness of at least 50,000 HB, which was the upper limit of the hardness tester. From this, it was determined that the effective hardness may as well be infinite. This is part of how it was determined that souls were not only non-atomic, but indestructible.

The team of researchers watched in fascination as the tungsten carbide ball point of the hardness tester visibly sunk into the surface of the fused soul. “Let’s measure.” Julianne straightened her back, lifting her face away from the hardness tester. She lifted her safety glasses. “Well…” She looked at the screen on the tester. “Hardness… 842 Brinells. That’s soft!” After a confused glance from Mike, she continued, “Compared to an unfused soul, I mean. 842 is about as hard as tool steel, so yes, it is objectively still a very hard material, but it’s soft compared to what we were expecting. This means that we could actually cut off a sample of this.” She glanced around the room. “No reason to sit on our hands here. Let’s get a sample.”

Julianne and her assistants worked to slice off a thin shaving, but the moment it broke its last contact with the fused soul, it seemed to melt into thin air and the space on the soul that had been cut away refilled itself. Julianne checked her Geiger counter. No change, the soul hadn’t started releasing radiation or heating up. “Okay. I don’t *think* that’s dangerous. We have to figure out what is happening here. Is it transforming into air? Or is it vanishing from existence? Get it into a wind tunnel and blow some smoke around it. Low wind speed.”

It was done, and the slice was repeated. When the flake broke contact with the fused soul, it again appeared to vanish. However, there was a slight disturbance in the air. Julianne watched with fascination as the two streams of smoke nearest to the shaving bounced closer together when it evaporated.

“It leaves behind a vacuum and the air rushes in to fill it, looks like.” Greg said. “So… It might be temporarily exiting the third dimension, moving through the fourth, and reappearing as if it were never detached?” He frowned. “That’s a wild guess, though. But do you suppose that could be it?”

“That’s a neat hypothesis, Greg. Let’s write it down and revisit it later, once we’ve made a few more observations.”

Over the next several hours, they tried several other slices. Once, they cut it in half to try to get a look at what was inside. It appeared to be a continuous mass of pure black. One of the halves then evaporated out, and appeared attached to the other half again. A grid was forced down over it, cutting it into thin vertical slices. All but one of these evaporated, and the soul reformed. The reformation process was very quick, taking less than one second. However, it was slow enough to observe reliably with the naked eye, without aid from a high-speed replay. Julianne, after mentioning the previous, snapped her fingers and said “Actually, let’s get a high-speed camera in here, and observe what’s happening in slow motion. We think we know what’s happening, but we might not really know.”

The high-speed was wheeled in, and pointed at the wind tunnel where the remaining tests had been held. “Let’s try slicing it in half again, first.” Kyle suggested. “That way we have the biggest chunk to observe, so we might see stuff we wouldn’t see if we cut off a smaller piece.”

Julianne nodded. “We might as well. Half, it is. Go ahead.”

The sample was cut in half. The high-speed replay showed that not only did it *not* evaporate as a single chunk, but that seemingly thousands, perhaps millions, of tiny strands peeled off of the surface before evaporating. “Zoom in on those strands.” Julianne muttered. “We’ll cut it again, but this time, make sure it’s all the way zoomed in on those strands.”

For this camera, ‘all the way’ zoomed in meant that it was zoomed close enough to visualize essentially anything. The sample was again cut, and the zoomed-in camera showed that the strings did not have a constant diameter, but that they had tiny, atom-sized lumps along the surface. “Those aren’t quite atoms, but we can’t say it’s a uniform discontinuous material, either. Pause the video and zoom in on the parts of the surface that haven’t evaporated yet. Make sure the angle is set to profile, so we can actually see differences in the surface.”

The profile view revealed that the lumps weren’t only manifesting when the strands peeled away. They were present in the original material, too. “It’s like…” Julianne rewound the footage and watched it several more times. “It’s as if the fused soul is trying to mimic 3D material. Like the fusion pulled the souls further into our universe.”

Mike pondered over this for a moment. “*Trying* to mimic? You don’t suppose it’s *conscious*, do you?”

That thought hadn’t even occurred to Julianne. “I *didn’t* suppose.” She stared at the soul, suspended in the wind tunnel, and tried to force the thought of it staring back at her out of her head.

**Chapter Ten**

Cold

2202 AD

The surgeon stood over the table, or more accurately, he stood in a room with several other surgeons, all of whom were wearing VR goggles. A few robots stood over the table, controlled remotely by the brain signals from the surgeon and his team. His team, in reality, wore pressure-mimicking gloves with resistance motors in their joints. This allowed them to interact with the tools and the patient as though they were actually touching and feeling the patient and the tools. The resistance motors would prevent their hands from moving freely through the objects they perceived in VR.

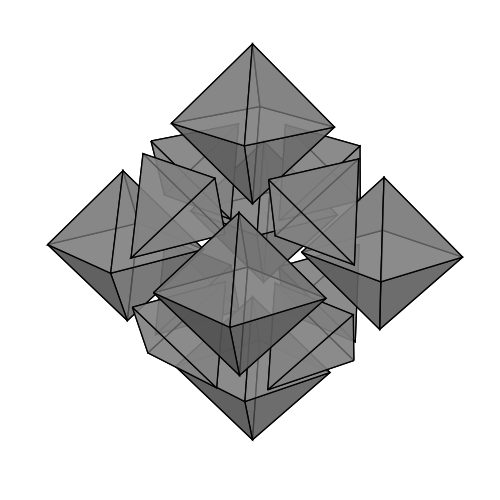
The surgeons and the table were three kilometers apart. This was to prevent any loss of personnel if they had a repeat of the previous volcanic disaster, as well as to give time to evacuate if the disaster was larger in scale.

The operation proceeded smoothly up to the beginning of anchoring. The soul began to grow in size. “Ah, it’s a big one.”

“Good, no heat this time.” The head surgeon smiled. “Let’s proceed. The current record for largest soul is three meters wide and far below freezing. It was lighter than air, and it floated immediately. The surgery room is fifteen meters wide, and the equipment is rated to continue functioning at 40 below zero. Shall we see whether we have a record-breaker on our hands?”

“Sure.” The operator grinned. “I’d love to see a record-breaker, especially one that’s on my shift. Current apparent size, five feet, soul is growing fainter. It’s currently past the lighter-than-air point. Anchoring machine is preventing it from floating, though.”

Another of the team spoke up. “Look at the shape! Have you seen anything like this?”

The soul was not simply one solid object as were all souls extracted before it. As the anchoring progressed, it shifted from the sphere all souls appeared as before anchoring, and became a series of octahedral and tetrahedral shapes pulsating outward and inward in size, maintaining the same distance between their geometric centers (though much-less-densely packed than the picture to the left). Every twenty seconds, a layer of octahedrons and tetrahedrons appeared on the outside of the growing mass. The assistant head surgeon spoke, “I’m not even sure how to measure this. The furthest-out solids are at least ten feet apart, but it isn’t a solid shape, but at the same time they all seem to be part of the same soul. Is this a record or isn’t it?”

The head surgeon scratched his chin. They’d backed away from the table (in VR). “It’s certainly a record of some sort, but I’m not sure what to even call this. I’m a surgeon, not a physicist.” He turned to face the operator. “What do you make of this, John?”

“Well, my guess is, this is a bunch of prongs coming off of the surface of the 4D complete soul, each of them intersecting our universe individually, giving the appearance of multiple objects, but in reality all part of a single object. We’d have to go by total volume if we’re going to call this a record. We can measure when the anchoring is done.”

The temperature gauges in the room were dropping rapidly, as they expected. “Can we get ventilation going through this room? We’re currently at 5 degrees for average air temperature in there. We can operate for significantly below that, but I’d rather prolong it if we end up continuing further than we foresee.” The fans in the operating room kicked on, dragging hot, dry desert air in and forcing the cooled air in the room out. The fans whirred for a bit, during which time the anchoring was paused. “Okay, we’re at 15 C and rising. We can proceed.”

The anchoring machine was switched back on, and the octahedrons and tetrahedrons resumed pulsating. The outermost layer now reached past where their robotic avatars were standing, but each octahedron was far enough apart from the nearest tetrahedron, at about three meters apart (and vice-versa) that there was still plenty of room to stand in the room. “Hey.” The operator said. “What if these octahedrons and tetrahedrons expand to fill the space between them? Won’t we be crushed?”

The head surgeon gave it some thought. “You might be right. If that happens, we lose the drones in the room. If anything, they could act as ballast to keep the soul from floating away, like the anchoring machine is currently doing.”

“They’re also expensive. But they do weigh about 100 kg each. That’s certainly enough weight to weigh it down. The anchoring machine alone is 300 kg.” The operator pointed out. “Current soul temperature is at -60 C. We are below safe operating temperature. Proceed?”

“Proceed. Turn up the ventilation. As long as the air temperature stays above -40 C, we’re good. These suits only transmit weak pressure, and weak motor-restriction, so we ourselves shouldn’t be in any danger. There’s no temperature transmission on these things.”

At that point, a strange crackling sound filled their ears. They looked around the operating room, and saw that there were now octahedral shapes pulsating on the edges of the room, digging into the walls. “Do we still proceed? This damage is going to be very costly, not to mention, we don’t really have a way to keep the damage localized, nor do we have any way of containing this soul.” The operator looked to the head surgeon for guidance.

“I think we’re past the point of no return.” The head surgeon folded his arms. “If we want to keep the soul from floating away, it needs to be pulled as far into our universe as we can make it.”

The operator noticed that with each pulse, the octahedrons’ maximum size increased, which subsequently left slightly less space between them each time. “We’re going to lose the drones. Should we evacuate them? It’s my understanding that these are pretty expensive pieces of equipment, despite their potential use as ballast.”

The head surgeon nodded. “You’re right, that would be pretty difficult to explain in the damage report. The anchoring machine can take over from here. We’ll evacuate the drones. We have a remote kill-switch for the anchoring machine here where we actually are, so it should be fine.”

They filed out of the room. The octahedrons had already taken over the hallway, and were destroying the walls. “Try not to touch them; they’ll freeze the drones solid in seconds.” He looked around, noting the density of them. “It’s understandable if you lose a limb or two on your way out, though. I won’t ask the impossible.”

The floor, too, was now riddled with the octahedral shapes, punching holes through it, and the ceiling. “We ought to jog. Yeah, we have our pride, and there are rules against it, but these are expensive machines and they need to be brought out safely.”

The head surgeon nodded. “We’ll jog. Watch your step.” They then broke from a brisk walk into a jog.

At this point, the octahedrons were adding an outer layer every three seconds, steadily accelerating. Their machines were easily outpacing the current rate of expansion, however, and after half a minute of jogging, the machines broke out of the expanding cloud of the soul. Noticing that they were slowing down, the operator broke in, “We aren’t sure that the cloud’s accelerated expansion won’t continue to accelerate. It might catch up with us again if we slow down.”

They picked up the pace once again, and soon enough they were outside the facility. “There’s no going back in.” The assistant surgeon remarked. “The whole place is going to be riddled with holes.” The desert heat beat down on the robots, but their pilots did not feel any of it, and it didn’t particularly matter as the robots could operate well beyond boiling point anyway. “I wonder how much it’ll cost to fix.” The drones continued to trot through the desert. The cloud was still expanding. The facility was in shreds, and the cloud continued to expand outside of it.

“Uh,” one of the surgeons said, “which way should we go?”

The head surgeon pondered for a moment. “We should bootleg north, towards our left. We’re in that direction from the drones, so if they’re closer to us, it’ll be easier to recover them.”

“That makes sense, I guess.” The operator said. They continued running towards their north. “I’m not gonna lie, this is making me tired. These things don’t have an autopilot?” They were running on omnidirectional treadmills. Since these were full-body analog systems, in order for them to run, the surgeons and the operator had to run with their real bodies.

“These drones weren’t designed to run. They weren’t designed to be piloted this far, or outside at all. They’ll *work* for running, and they’ll continue working outside the facility, even if it winds up completely gone, because they communicate with the transponders on a p2p basis, no servers in between. As long as we’re here and they’re out there, they’ll continue to work.” The head surgeon said, as much to reassure himself as to reassure his team. He then realized he completely missed answering the question that was asked. “As for why they don’t have autopilot, these are surgical machines. They need to be human-piloted at all times.” The operator supposed that made sense.

The operating table, along with the body of the soul’s owner, was meanwhile crushed by the ever-expending shapes as the space between them diminished. As the space shrunk to nothing, the fragments, down to the atomic level, were expelled outward from between them like liquid being squeezed from a sponge. As was the new standard procedure for soul retrieval, the facility was unmanned during retrievals, visited only by maintenance crews between procedures. Everything in the building had been wired up to a central computer, which controlled things like internal building temperature, lighting, security, and electricity consumption (though, since souls were now used to generate most of the world’s electricity, and did not emit pollution or radiation, electricity consumption was an archaic issue).

The immaculately put-together facility was atomized and flushed outward from the ever expanding cold mass. The growth rate of the outer cloud layer of the soul was now twenty layers per second, far faster than the drones were capable of traveling. However, they were over a kilometer-and-a-half from the outside of the cloud by this time. One of the surgeons turned around to see whether anything was behind them; the transparent soul reached into the sky, now hill-sized, visible only by the vapor condensing around it. “I think we smashed that record.”

“Well there’s no debating that.” The head surgeon muttered, without turning around.

“You really ought to look at this.”

The head surgeon turned around and was awestruck. “That thing is a soul?” They all stopped to stare for a moment, but only a moment. “We’d better continue running. At this point there’s no telling how large it will get. And at that size, it’s cold enough to kill on contact.” After several more minutes of running, they completed the two-mile run to their real location, loaded the drones into a transport van, and took off the VR equipment.

“What now?” The operator asked. “It’s unthinkable that it could reach us all the way over here, but we need to get further away, just in case. Have we issued the evacuation order for the facility yet?”

“No. We should. Go ahead.” The head surgeon gestured at the switch.

The assistant head surgeon pressed the switch, setting off the evacuation alert.

“Set it to north.”

The assistant did do. The alarm now said, “Please proceed north from the facility. Exit the facility in a calm and orderly fashion.”

The head surgeon nodded. “Let’s get out of here. It probably won’t reach this far, but we can’t count on that.” They piled into the van alongside their drone counterparts (now deactivated). Unlike most vehicles of the age, this one was manually driven. He started it (a simple button-press), and off they went. The service road which led to their remote operating facility, built into the side of a mountain, wound off towards the south, down the hill from them, the three kilometers to the southern retrieval facility. The clouds cast lumbering shadows over the plains between them and the retrieval facility. A crater had formed where the retrieval facility once stood, slowly and steadily expanding outward.

“Where’s the soul gone? I can’t see it. All I see is that hole.” A surgeon pointed out. The head surgeon, behind the wheel, glanced over. “The models predict that as a soul grows larger, it loses its characteristic red coloring. This is the first time we’ve seen one of this size. It would appear that a soul this large approaches, or reaches, the refractive index of air.” He turned his attention back to the road. It was not a fancy road, consisting only of a strip of pavement just large enough for two opposing lanes of traffic. “What I’m saying is, you can’t see it, but you can see the clouds of vapor around it.” The road curved briefly south to go around the mountainside.

As the head surgeon spoke, the operator stared in horror at the road ahead. It was pockmarked with tiny pyramidal imprints. Moments later, the transport van smashed into seemingly nothing. Several of the fragments had materialized inside of the van, instantly killing its inhabitants. Where they hadn’t appeared inside of the inhabitants (thereby flash-freezing their internal organs), they appeared near enough that the drop in temperature caused death by shock. It didn’t end there, as the shapes expanded to fill the space between them, they were atomized, just as the retrieval facility had been.

The growing cloud of unbelievably frigid shapes continued growing, already six kilometers wide. It kept growing until it hit thirty kilometers wide. When it stopped growing, it began to rise. It kept rising until it reached several dozen kilometers above the earth’s surface, an invisible, incredibly cold, indestructible, feather-light titan weighing only a single kilogram but spanning thousands and thousands of meters, a fractal octahedron gently swaying inward and outward, visible only by cirrus wisps around it, ready to deal a swift death to anything that approached too closely; a constant threat to all space exploration thereafter, and a permanent resident of the skies. Its counterpart in the core slumbered soundly, rumbling gently, to give out heat to the planet above it for months to come, just as the sky giant took heat away.

**Volume Two**

Hole

**Chapter Eleven**

Turning

Year: 2202 AD

Terry, alone in his home, sat in a recliner with a glass of hot chocolate. The news report came on, announcing that there was now a very large soul loose in the upper atmosphere, but that it was at an altitude too high to have more than a minor effect on global weather patterns. The meteorologist, who was also at the table, then countered by saying that extremely cold upper-atmosphere air may sink from the soul and enter the atmosphere below. A physicist was soon brought on, and explained that, as the soul is reportedly near absolute zero, it is more than cold enough for liquid air to condense on and around it, and fall like rain into lower, warmer layers of the atmosphere, where the introduction of the extremely cold re-boiled vapor would certainly effect the flows of jet streams in the upper atmosphere, potentially wreaking havoc on global flows of heat.

Terry changed the channel. It was the year 2202 A.D. He had retired from Soul Retrieve some thirty years earlier, and had been living quietly on his own ever since. For income, he fixed furniture for locals and took painting commissions (he had taken up painting as a hobby not long after the death of his son-in-law, Chris). The commissions now made up a large portion of his income. What wasn’t provided for by his active income was easily covered by his nest egg, which he’d been building up for the 100 years he’d been in the active workforce. This was just about how he’d imagined his retirement would be. Terry had become a devout Christian since leaving Soul Retrieve, and had repented for his role in the field (which was now regarded as a blasphemy against Christ). The Fifth Council of the Vatican was currently occurring, and had been since 2200.

The primary topics of this council, so far, had been whether those possessing computer brains are considered to have souls for the purpose of determining whether they were capable of sin (as experimentation by Soul Retrieve had determined that those with computer brains did not have physical souls), whether the act of retrieving or aiding the retrieving of a soul was a sin worthy of eternal damnation (equivalent to murder), whether those who had received gene therapy to become biologically immortal had sinned to do so (by, of course, going against God’s design), whether the church was to accept multiple instances of the same consciousness simultaneously, and, finally, whether the church agreed with the claims made by Francis Roberts several decades earlier, in his now-famous debate with Richard MacMillan. Specifically, whether the soul pulled from the body during the retrieval operation was in fact distinct from the spirit which was to return to Heaven when a person died free of sin.

Terry left the channel on for a while, as he sketched form studies for a commission he’d recently received. The commissioner had requested a live portrait of the family dog. Terry had asked for (and received) several photographs of the dog, and was currently studying how best to render the lighting setup the family had mentioned for the session by sketching the same angle of the dog’s head, with the same lighting, using differing shading gradients. This was, of course, done on physical paper, despite him having access to a healthy variety of digital input devices.

The TV continued, with occasional speech from one Cardinal or another. The Pope in attendance, Pope John XXV, did not speak. He was lining under the dog’s muzzle (it was a border collie) when something said by a cardinal caught his attention. “Honestly, those who depend on alteration of their own genetic makeup for their life ought to be considered dead in the eyes of God and the Church, for they have taken something which God made, and altered it beyond His intention, into a thing which does not die. Death, as we have previously reaffirmed time and time again, is a necessary part of the Christian experience.

“Christians are born, we do our works on Earth, perhaps some get married and bear children, some are perhaps more successful than others, but the thing that binds us is that we die and return to the Kingdom of God. As the world has changed, as it will continue to change, this must not be altered. Without the eventual return to the Kingdom of God, a person cannot truly be a Christian. For this reason, I propose that any living person who is over the age of 200 must be considered an aberration of God’s Will, and therefore either excommunicated from the church, or willingly sacrificed in the name of God, and allowed into his Kingdom of Heaven for repenting by giving up this unnatural imitation of life.”

Terry closed the channel, staring across the room at the screen (now fading through a calming series of nature pictures from the early 21st century). He had stopped drawing. His mind was racing. *Willingly sacrificed? But it’s 2202!* He got up, intending to walk out to his kitchen for a glass of water. A knock on his door interrupted him, however. The silhouette visible through the glass top half of the door revealed the visitor to be a smallish woman. Curious, yet not particularly worried, Terry opened the door.

Brianna stared up at him. “Hey, grandpa.”

Terry staggered back and felt faint. “I haven’t seen you in… Where’ve you been?”

“Elsewhere… The reason I’m here isn’t as simple as a family visit. The fact that I’m your granddaughter is simply a good enough excuse for my visit, that there shouldn’t be any suspicion.”

“*Suspicion?*” Terry crept back forward, and grabbed onto the doorframe. “What do you mean? If… What… What’re you here for?”

“SR is on the cusp of a breakthrough, which must not be allowed to occur.”

“I’m not going back there.” He stepped back, into his kitchen. The memories of his family, killed in that accident, came flooding back. “You, of all people, should understand that. We lost so much. You… I thought you were dead! I had that phone call from Nate, I…” An uncomfortable thought occurred to Terry. “Did you replace your brain with a computer?”

Brianna smirked. “I did, but the original is back in place, now.”

Terry wasn’t expecting this. “What do you mean, the original is back in its place?”

It was Brianna’s turn to be surprised. “Nate never told you how the operation went?”

“I haven’t spoken to him since he asked me for money that time. You kids only bother visiting or calling when you need something.”

Brianna avoided eye contact for a moment. “They took my brain out, and set the stem cells into place. My brain regenerated the parts that died from the radiation poisoning; in the meantime I started doing research.” She resumed looking at Terry as she spoke. “With the computer brain, and these are a whole different animal from the one your father had installed, I was able to think of things I’d never even considered. Specifically, what if humans had the ability to extract their own souls at will?”

Terry didn’t say anything.

“You know how powerful souls are, right? You’ve seen what they can do, yourself.” She smiled, slightly. “Imagine what a person could do if they could use that sort of power.”

Terry finally managed to speak. “You’re insane.”

“I beg your pardon?”

His grip on the door intensified, and he nearly slammed it shut right then. “I haven’t seen you in, god, thirty years. I thought you were dead. I put all this soul crap behind me. I took up carpentry, and later I taught myself how to paint. I’ve been living quietly, perfectly content, since I left Soul Retrieve. I’ve been living for myself, for once; without devoting myself blindly to scientific progress or some grand social cause. And you come here without so much as a phone call in advance, touting some ‘we gotta stop the bad guys’ nonsense with you, and *now* you’re telling me you’ve been getting into soul extraction yourself. I *left* that. Soul extraction *took* your only child. It took your husband, too. All the tragedy in your life is because of soul extraction. And here you are, getting directly involved.”

Brianna’s facial expression hadn’t shifted a millimeter during Terry’s tirade. “It isn’t the same as what you know. This is different.”

“How is it different?”

“I can do it, on myself, right now, and it won’t kill me, and I can put it back where I got it from.”

“You couldn’t possi-”

Terry was cut short as an orb manifested itself in front of Brianna. It hung in the air in his front doorway, a deep red, and after a few seconds it evaporated back into nothing.

Terry felt the blood drain from his face. “How…?”

Brianna smiled. “One of the benefits of having a computer for a brain is that I’m capable of analyzing vast amounts of data directly, and drawing my own conclusions from it. So, I was able to track down the original AI run logs which resulted in the inventions of the extraction and anchoring tools, and I figured out how to manipulate the miniscule electromagnetic emissions of my own brain to achieve the same.”

“This is such bullshit. But I saw you do it! But, it’s just too far-fetched.”

“After I achieved that level of understanding of the fourth dimension, it came time to put my new memories back into my old brain. Then, once I was restored to original working order, I had to try out what I learned. It was a success; I’d brought out my own soul. But I thought, ‘There must be more to it than this’.”

Something bothered Terry about the story. “Where did you even get the run logs?”

“Julianna helped me with that. She’s got nearly as much authority over SR as the director himself. Getting the AI logs wasn’t much trouble for her.”

“Ah.” That was all Terry could manage to say, not having expected a perfectly reasonable explanation.

“So, as I was saying, there must be more to it. I’d seen souls that were huge and cold, or small and dense and hot, or pointy, or round. So, I saw a black market brain surgeon and had the computer brain reinstalled so I could ponder it again. I had to switch back and forth from my real brain to my computer brain several times, through several cycles of coming up with a theory and being able to test out that theory with my own brain and my own soul. What I’ve found was that all souls, in their 4th dimensional home, are in fact connected, like a vast and normally incomprehensible tree, with each of us being a leaf on that tree. But, you see, there are different parts of the leaf. There is the sharp end, the broad flat surface, and the stout stem. There are veins; there is a side which faces the sun and a side which faces away. You can’t understand the leaf as a whole by simply looking at a tiny particle from it.

“That tiny particle is like the part of the soul we refer to as ‘the soul’. But, the whole thing is much more complex than this sphere I just showed you. In fact, each soul is more or less identical. The differing characteristics of each soul are explainable as, the operation was taking different parts of the leaf. The vast majority are from the inside of the leaf. But, occasionally, you pull one that’s located at either the tip of the leaf, or the stem. That’s when you get ‘hot’ souls and ‘cold’ souls. Now, occasionally, you’ll have a soul that’s either heavier or lighter than a normal soul. This is the only observable difference between souls that is reflected in 4-dimensional reality. Some souls are ‘larger’ than others, so when you take a piece, the piece is ‘heavier’. Does this make sense so far?”

Terry blankly nodded. “But why are you telling me all this?”

“You know their internal structure, which makes you valuable as an ally. You are my grandfather, which makes you my family and therefore trustworthy. You left them willingly, which means you are likely to be receptive to my cause. Now, surely you’ve noticed that despite your gene therapy, you aren’t quite as spry as you used to be?”

Terry *had* noticed. His joints cracked more often, and he was taking longer to cover the normal route he used for his morning run. He had plucked a grey hair from his chest the other day, but hadn’t thought much of it. “What does that have to do with this?”

“It has quite a lot to do with this, actually. SR is very close to learning what I’ve learned, which is what we must prevent. If they learn what I know about the soul, they *will* take full advantage of it, for whichever cause they deem to be for the benefit of human progress. What I have learned, apart from how to do my little parlor trick with pulling my soul out, is that souls are an energy source.”

“Well, of course they’re an energy source. Most of the world’s electricity is generated from soul heat these days.” Terry said, though he suspected she meant something else.

“I mean, they can be directly used; *burned*. By ‘mass’, they contain far more energy than anything else currently known to science, even matter-antimatter pairs. If this energy is utilized directly, it can fuel *true* eternal life. All you have, right now, is extended life. It’s quite an extension, I know, but you see that you’ve begun to age. You have, likely, another twenty or thirty years left before you die of old age. It’s gradual now, but it’ll speed up. Right now, you have the body of someone who’s biologically thirty-five, maybe forty. But you’ve been alive for so long that once your body ‘realizes’ how old it is, it’ll begin to rapidly shut down. With what I want to teach you, you can extend your life for potentially millions of years. The soul contains that much energy. But, by doing this, you will not reincarnate. When you eventually die, you will remain dead. There will be no afterlife for you; there will be no heaven or hell. There will be simply death. Do you accept this?”

**Chapter Twelve**

Rotating

Year: 2202 AD

Terry stepped back from the doorframe once again. “You’d better come in. No use carrying out this entire conversation on the doorstep.”

“About damn time you let me in. Get me a glass of water, my mouth is dry from all that talking I had to do to make you let me in.”

She stepped up from the front porch, into the house. Terry sighed, “If you wanted to come in and have a glass of water, you could have just asked.”

“Get me a glass of water, *please*.”

Brianna took her coat off, and placed it on a chair near the front door. Terry, meanwhile, shrugged and crossed the room to the glasses by the sink. “So, I take it you’ve had an interesting life, then?”

Brianna sat in a chair next to the table, across the room from the front door. “Interesting. That’s not the first word that’d come to mind. Yeah, you could call it interesting.”

“C.S. Lewis once said that sufficiently advanced technology was indistinguishable from magic. I suppose this is what he was talking about?” Terry had filled the glass and was walking to the table.

“I’m not familiar with C.S. Lewis. Was he a politician?”

“I don’t… I don’t think so? He was an author, I don’t think he was ever involved with politics, at least not as an office-holder.”

“Look it up.”

Terry handed the glass of water to Brianna. “… Alright, why not.” He pulled out his phone, and typed in *C.S. Lewis*. “Says he was a Christian apologist, a lay theologian, and of course an author, but nothing about politics. Hang on.” Terry tried typing in *Any suff-* and was immediately greeted with an autocompleted quote in the search field. “Oh!” He said, surprised.

“What? He was a politician, wasn’t he?” Brianna leaned forward.

“No, I was totally wrong.”

“About him being a politician?”

“No, I was wrong about that quote being from C.S. Lewis. It was from Arthur C. Clarke. And before you ask, *no*, Arthur Clarke wasn’t a politician either.” He sat down. “Just because someone’s important doesn’t mean they must’ve been a member of the government.”

Brianna giggled. “It’s nice to be wrong. I missed you, grandpa.”

“Well shoot, why didn’t you visit sooner, then?”

She shrugged. “I was caught up with my own research. You know how Julianne is tied up in hers, and has been forever. Speaking of which, they have come up with another breakthrough at SR, since you left, that I thought you should know about.”

Terry stared at the ceiling. “I don’t want to be involved with SR anymore. But… I’m curious. It’s been a while. What are they up to?”

“Well, they’ve come up with a way to teleport people, using what they knew about space folding.”

“Is this like quantum teleportation?”

“No. Quantum teleportation only transfers information. You need an atom on one end, and an atom on the other end. This is true teleportation. They have succeeded in pinching off a volume of space, sending it through the 4th dimension, and reattaching it to our dimension elsewhere. It was deduced that, if we can pull something from the 4th dimension into the 3rd, we should be able to force something from the 3rd dimension back into the 4th. With this, we can effectively return a soul to the 4th dimension. It’s similar to what I use to return my soul after taking it out.”

Terry stood up. “I’m going to get myself a glass of water as well. This is going to be a while, isn’t it?”

“You could say that.”

Terry stood up, intending to walk over to the sink to fill a second glass with water, and turned on the faucet, but something made him stop. Hanging in the middle of the kitchen was the face of an unfamiliar man, smiling at them. “What’s that?” Terry pointed at it just as the unfamiliar man threw a grenade through the hole he had been peering through until a moment ago.

“*Shit!*” Brianna screamed, throwing her arms open and subsequently opening a second small rift in space, which the grenade fell into. She then clapped her hands together, and both holes snapped shut.

“Brianna, what the fuck?”

“They knew I was here. How could they know I’m here?”

Terry stood, mouth open, by the sink. The faucet spewed water into the sink below. “I asked you a question.” He shut off the faucet.

“We have more pressing concerns. SR, or some madman associated with them, knows I’m here. They have the ability to teleport, and they have explosives. I sent the grenade back where it came from, but I can feel them trying to open another hole through space, and as strong as my mind’s become, I can’t fend off a concerted effort fueled by a huge machine with the tiny electromagnetic waves from my brain.”

“What do we do?”

“We leave.” Brianna threw open her arms once again, a two-meter-wide hole opened in the floor, and in both of them fell. They landed less than a kilometer away in a park, off in the woods far behind the paths. Brianna immediately collapsed.

Terry sat up, and looked around. The hole had opened only three feet from the ground, so he wasn’t injured. The hole in space was closing, but quite slowly. Terry understood the danger. The person who had opened the first hole and thrown the grenade could, conceivably, open another hole in his kitchen, and throw another grenade into the hole which was gaping open above him. “Brianna. Brianna! Get up!”

She was unconscious.

“Shit, shit, shit, shit…” Terry muttered to himself as he rolled Brianna out from under the hole. Once he was out, he stood up, and recognized where they were. He looked down at the space where the hole had been, and noticed that it was gone. Rather, he could see something that seemed like a shadow of the hole on the ground. He crouched back down, and saw that the hole was still very much there, but that it was only visible from one side. Terry tried pressing the hole shut from the outside, but it was too rigid. It refused to close any faster. It had an odd feeling to it, like squeezing a large ball of cotton with a core of steel wool. It had a bit of give to it, but past a certain point it would not squeeze any further. Brianna groaned. “Brianna!”

“Okay, we’re out of there.”

“Not yet we’re not, you’ve gotta close that hole!”

Brianna slowly shook her head and blinked a couple times. “Oh, right.” She clapped her hands together and the hole snapped shut. “I’ve never had to make one that size before… but we seem okay.”

“How did you even do that?”

“Well, teleportation and soul retrieval work on basically the same principle, except in this case we’re expanding the third dimension *into* the fourth, rather than compressing the fourth dimension into the third. Basically, instead of reaching out of the third dimension and grabbing a soul, we reach out of the third dimension and grab a different part of the third dimension, and pull that back to our location instead of a soul.”

“So why are we still so close to my house? Couldn’t you have dumped us in Europe or something?”

“Okay, three problems with that. One, I don’t know Europe that well, so we might materialize over a river or underground or inside of someone else. Two, I walked through here not that long ago, so I knew the area, and I knew what parts were unlikely to have much pedestrian traffic. Three, I can’t teleport more than a kilometer or so at a time.”

“Couldn’t they find us really easily, now?”

“No, actually, your house is a place they already knew about. They’ve probably been checking it periodically for the past few years, maybe every hour or so, somewhere you wouldn’t notice. They’ve probably been closing the wormholes before you could see them every single time.”

Terry tried to ignore the wave of horror he had when he realized all the things that they’ve probably watched him do. “Why were they watching me?”

“One, you were a former employee, so you knew things that the average Joe doesn’t know. You signed an NDA, didn’t you? The wormholes help them enforce it. There’s nothing you can physically do to prevent them from watching you, either. Nothing except leave without them noticing. Two, this is the main reason, they knew about me. They knew I had some kind of knowledge they didn’t have. They knew you were a relative. They were probably watching over everyone I’m related to. My cousins, Nate, even Julianne.”

“Is she safe? If they knew about you, did they know she helped you?”

“Even if they did, there’s nothing they could do. The task force that’s after my skin is ranked far below her. She’s untouchable, as far as the official directives go. Her mind and her research are just too valuable for SR to dispose of, even in the interest of catching me.”

Terry pondered. “Do you suppose she knows they’re trying to catch you?”

“If she did, she’d have put a stop to it. I could open a wormhole to her office at any time, and tell her, but I’d never do that. If they know that she knows they’re after me, they might break their own rule against hurting her, because she might refuse to conduct any more research, and if she does that, she’s no longer valuable to them, and if she’s no longer valuable to them, good bye.” Brianna stood up. “Alright, so we need to get you the abilities I have if you’re going to be useful to me.”

“I never agreed to help you. In fact, I’ve got a lot of reason not to help you. Don’t get me wrong, I despise SR, and I’d love to see them fail. But I had peace. I had my crafts. Now that you showed up, there’s been an attempt on my life! I don’t want to die yet.” Terry folded his arms. “Now, they’re probably in my house searching around for clues as to where we went. Maybe they’ll just burn it down when they don’t find anything. If I go home, they’ll probably kill me because they saw us talking, won’t they?”

“Maybe worse. They might rip a hole in your skull and use your brain to process data.”

Terry didn’t break eye contact for several seconds. Then the absurdity of what he’d just heard struck him. “I’m sorry, what?”

“It’s a form of torture they’ve come up with. They connect your brain to a computer and flood you with experimental data, and stimulate different parts of your brain to force it to act like a Turing complete computer, against your will. You still have the parts of your brain that process memories and emotion intact, so you can comprehend exactly how horrible it is. They leave just enough spare brain power free of the calculations that you can contemplate how awful the torture is, and just enough to think fleeting thoughts about your family, or your hobbies, or your home, or your friends, or your memories… but only fleeting thoughts. They let you have just enough freedom that you never really get used to it. You’re fully conscious the entire time, too. It’s concentrated mental exhaustion.”

This sounded horrendous to Terry. “Is this legal? This can’t be legal.”

“It isn’t, but SR isn’t really bound by laws anymore, outside of the parts they show the public.”

Another thought occurred to him. “You’ve undergone the torture, haven’t you?”

She grimaced. “No. A former accomplice who tried to escape SR after being captured told me about it. We were on the run together for a few months. When they finally found us, I was asleep, and he pushed me into a wormhole and closed it behind me. He wasn’t as strong as me... He could only open one wide enough for one of us, before they could get to us. If he’d tried to follow me through, they’d have caught him, and followed me through the wormhole. He’s probably either back in their chamber processing data, or he’s dead. I really, sincerely hope they just killed him this time.”

Terry stared at the sky and wondered if that giant floating soul that was on the news just an hour earlier was above him. Then he looked down, and contemplated the soul that was resting, with certainty, at the center of the earth. “What will they do if we don’t stop them from figuring out what you know?”

“They’ll probably farm humans for their souls like livestock, and burn their souls to give themselves eternal life. They know that gene therapy is only a temporary stopper on death. It can only bring humans to their absolute genetic potential, which gives them about 200 years to work with. Beyond that, they need to go beyond the barriers of humanity. They’re on the verge of uncovering the fountain of youth, and once it’s uncovered there’ll be no hiding it from them again.”

Terry sighed. “Damn it. I don’t have anything to go back to. My house isn’t safe for me anymore, because of this. I’m not jumping into this willingly, but I’m at least going to help you rescue your friend from SR. Whether I stick with you beyond that, we’ll decide after we rescue him. Teach me what you know about folding space, taking souls out, teleportation, whatever. I’ll learn as much as I can.”

**Chapter Thirteen**

Spinning

**Part I:** Open

Year: 2202 AD

They approached a large building, Terry in shock from what he’d just heard.

“Absolutely *not*.” Terry said. “You didn’t say anything about that.”

The shadow of the building completely engulfed the small alleyway, drowning the scene in shadow. The smell was a complex cacophony of human refuse, waste, and urine. Brianna gestured at the door.

Brianna shrugged. “Surely, you didn’t think we could just sit down, and I’d give you a few handy tips, and suddenly you’d be folding space at will. If it was as simple as focusing your mind and envisioning the wormhole until it springs up, people would probably have figured it out thousands of years ago when focusing their minds and envisioning stuff was all they had to do for fun.”

“But, Brianna, this is exactly how my father died. He did the procedure, and the processing power drove him insane, and he ripped his head open and started babbling about becoming the machine, or something. Remembering it is making me want to vomit.” He wasn’t close to vomiting, of course, but he certainly did feel nauseous.

“I’m telling you, this isn’t the same tech you’re familiar with. This is another friend of mine, who specializes in flawless brain preservation and high-fidelity memory transfer. Her process, though costly in terms of energy, perfectly transfers all memories.”

The large, dark-skinned woman stood up from her desk, and turned to face Terry and Brianna. She stood eye-to-eye with Terry. “I’m glad to meet you, Terry. It’ll be good to have someone who knows their layout aboard.” She extended her hand. “My name is Natalie.”

Terry took her hand. Her grip was strong, and the handshake was firm. “Good to meet you, Natalie.”

“Has Brianna already explained the procedure to you?” She gestured at the chair.

Terry shuddered. “Yes.” Above the machine hung thousands of tiny wires, each with its tips colored with bands of brown or green or yellow or black, *those are like the resistor color codes*, Terry thought. Next to the machine sat a server rack with a stack of boards roughly resembling the shape of a human brain sitting on it, with thousands of wires coming out of it, with similar bands of color on their ends. He returned his eyes to Natalie, and continued, “She has, but I’m not sure about going through with it. You see, my father was one of the test subjects when this technology was first introduced, and he went completely insane and killed himself after a while.” Natalie had sat back down at the computer and was typing into her computer. “So, I’m afraid of having the same thing happen…” Brianna was adjusting the instruments near the chair. “To me, when I try…”

“All set.” Brianna gestured at the chair. “Have a seat.”

“Are you even listening? I still haven’t agreed to anything! I’m serious, I want to help you, but I’m not taking my brain out of my skull to do it! It’s been in there for well over a hundred years. It doesn’t need to come out.” Terry sat down at the folding table across the room from the chair under the machines.

“If you’re going to learn how to do this, that brain needs to come out. I’m very sorry that I’ve ruined your retirement for you. I understand how much you valued your peace. But, right now, your options are to either learn how to control the folding of space, or go back home and try your luck with SR.” She gestured once again at the chair. “I heavily suggest the former. Once SR is in shambles, it should be safe to return home. But before we break them, I can’t promise your safety.”

“This feels an awful lot like blackmail. I’m starting to think you’ve planned this out in advance, to force me to join you. How do I know you aren’t actually working with them?”

Brianna almost had an outburst, but restrained herself. “They threw that grenade to try to *kill* me. How could I possibly be working with them? Why would I even *be* working with them?” She leaned back against a server rack and folded her arms. “Look, I’m just going to forget you even suggested that. I suggest you don’t make that accusation again. If you want to go home, I’ll open a wormhole to your house, right now, and you can go home. If I’m really working with them, what do you have to lose, right?”

“I get it. Fine.” Terry waved his hand in front of him. “Now, how many times do I have to swap back and forth before I learn how to do this space-folding thing? You said you had to swap back and forth a few times to ‘get it’.”

Brianna was a bit surprised, and wasn’t sure why Terry had gotten this idea. “Oh, you only need to switch once. I’ve already compiled the entire procedure into a set of readable memory files. Once the computer brain is in, we can transfer them to your computer brain, and from there, we can transfer them to your real brain.”

Terry had a thought. “So, why can’t you just transfer it to my brain, directly, right now?”

“They have to acclimate to your own thought patterns first. Everyone has different connections in their brain, and sorting out what an electronic signal from one brain means, in the context of the connections in a different brain, takes a long time and a lot of processing power. This is much easier when your thought patterns and the high processing power exist in the same medium. It only takes a couple minutes to transfer the signals from the memory to your brain, but it’ll take the computer brain several hours to decipher the memory. It would take your normal brain decades. This is before even considering that the waves in your own brain are different from the waves in my brain. You would need to selectively use different thought forms to achieve the desired effect, which the computer brain can help you figure out.”

All Terry could manage to say was “Oh, alright.”

“Sit.” Brianna gestured once more at the chair. “It only takes a couple minutes.

Natalie was sitting at the computer. “Alright, we’re ready for the mind upload. We’ll have to put you under, of course, to get at your brain.”

Terry felt his skin prickling as he sat down. “I’m not going to be awake for this, am I?”

Natalie fastened a mask over Terry’s face. “Don’t worry. I’m a crack anesthesiologist.” She smiled down at him, gently. “You’ll be out like a light.”

Terry’s face sunk into a concerned frown. “Now how can someone be a crack anesthesiol-” Terry went black nearly instantly.

Brianna and Natalie set to work, with Brianna performing the physical task of removing the top of Terry’s skull (of course requiring that Terry’s hair be shaved off. His mustache was left alone), and Natalie performing the final checks on the hardware. “Are we good to start?” Brianna looked over at Natalie, her gloves stained deep red.

“Yeah.” Natalie glanced at Brianna, and back to the screen. “Go ahead.”

One by one, Brianna pulled down wire after wire, and inserted the needle-like ends deep into Terry’s brain. “Uh, Green *is* five, right?”

Natalie, shocked, looked over. “Yes, it’s five. You weren’t sure?”

“Alright, thank god. I was pretty sure, but it’s been a while since we’ve done this. Last time we even saw Lance was at least ten years ago. And his operation was the last time I’d had to do this.”

They worked in silence for a while after that. Finally, Natalie said, “We’ll get him back. I’m sure he’s still alive in there.”

**Part II:** Break

Terry woke up in his bed, gasping for air. He immediately ran his hands through his hair and found that his skull was quite intact. His fingertips found no telltale scar lines under his hair. He threw the covers off and made a beeline for the bathroom. The heater, an old steam radiator (the house had been constructed in the mid-20th century) clicked reassuringly as he sat down to relieve himself. He was staring at the tile patterns on his floor, idly contemplating how symmetrical a section of the tiling would be if those two colored squares had been switched, when a rapping knock came at his front door. “Just a minute!” Terry shouted. “Be down soon!”

He completed his business, washed his hands, briefly glanced at his reflection in the mirror, and toweled his hands dry. He shuffled out of the bathroom to the front door, which was nearby. It was Nate.

He opened the door, and looked down at his guest. “Nate? What brings you out here?” He smacked his lips a bit. His mouth was dry.

“I figured I’d come by to tell you about how Brianna’s operation went.”

Terry scratched his head. “You could have called ahead or something if that’s all you’re visiting for. I just got out of bed a few minutes ago.”

“This is urgent. You need to know. Everyone needs to know.”

Terry stepped back to let him in. “What do you mean, *everyone* needs to know? What does that even mean?”

“She’s broken loose of her brain. They tried to put her back in her brain but the new Brianna wouldn’t fit inside her brain anymore. So the rest of her spilled out into the radio waves, and she’s, she’s taking control.”

“I just saw her earlier, and she seemed fine. A little kooky, but fine.”

Nate looked shocked. “How could you have seen her earlier? She’s in a coma, Terry. I could only afford to hire a street surgeon to perform the operation because you didn’t help me, it’s your fault she’s in the air now, it’s your fault she’s driving this whole world mad, you stupid old man.”

Terry felt a surge of pure rage, and punched Nate as hard as he could, in the eye. It popped like a grape, and Nate’s dead body fell backwards, through the porch railings, like sand. A wormhole opened up underneath the porch, sucking Nate’s ashes in, as well as Terry himself.

He fell into sand, and looked up, and the wormhole was gone. A facility in front of him exploded, and when the dust cleared, there was only an ornate mahogany table. Terry felt his nose dripping, and reached up to touch it. His hand came away stained red. He looked down, and there was an expanding red stain growing in the sand below him. He felt faint, and collapsed.

The lava was warm, but it didn’t burn him. He was sinking in it, but it wasn’t dark. He could see. The walls of the volcano were jagged. As he descended, it became warmer and warmer, and it became increasingly hard to move. “This makes sense”, thought Terry. “Lava is heavy. It’s like being buried in sand.” He could no longer move, at all. A point of light appeared in the distance, like a star. “What is that?” Terry asked, to no one.

Natalie stared at the computer screen, curious. “These are very strange readings.”

“How so?” Brianna, who had just finished storing the skull cap away while the procedure was under way, closed the drawer and turned to face Natalie.

“It might be because Lance was only 17 when he went through the same procedure, whereas… Just how old *is* Terry?”

“He’s my grandpa, and I myself am eighty-two. He’s around 140. Let’s see… He was born in 2061, so that makes him 141 years old.”

“That might explain it. These are the readings of a brain that has experienced eight times more time than Lance did. This may take a little longer than the couple minutes we promised him. There are, just, so many connections to map.”

The star grew closer. He recognized it. It was the soul residing at the center of the earth. He looked around him. There was only blackness in every direction. He continued to get closer to the soul. He could feel the immense heat being thrown off of it, now. “I shouldn’t be alive down here. I shouldn’t”

He looked up, and saw sunlight glinting off of the surface of the water. He swam upward to reach it, noticing for the first time that he hadn’t taken a breath in what felt like hours. Suddenly, he felt his throat beginning to burn, the pressure building up in his head, the need to cough increasing, but having no air to back it up. His lungs began to burn even worse than his throat; his head, pounding. His muscles burned, they couldn’t keep up this swimming without air. He needed air. He couldn’t tell whether he was a meter from the surface or a hundred. He gasped, the last precious air bubbles falling upward, racing away from him, to disappear in the distance, so impossibly far above him.

Suddenly, he broke the surface. He took several deep breaths. There was no land around him for miles. He continued to swim into the sky, marveling as gravity had released his hold on him. The water fell away from him, the horizon stretching further and further into an arc. He could see land at the edges of his vision. He tried to swim through the air towards this land, but it was to no avail. He wasn’t swimming upward, he was falling that way. Suddenly, he felt very cold. He turned around as best as he could in midair. Wisps of cloud hung in the air, around a square void. Before he could react, his entire body froze solid. He watched in horror as his arm entered the soul and immediately shattered into icy dust.

He fell to earth, and found himself in a dimly lit field, dark except for two deep yellow lamps high above the grass. He felt his chest, and knew he was once again solid. Next to him, he stood.

“Who are you?” Terry asked, backing away from Terry.

“I am I. I am Terrence Gallo, son of Boris Gallo. I am a painter. I am a carpenter. I am a Christian. I am a devoted family man.”

Terry felt small, compared to Terry. He shrunk back. “But until just recently I hadn’t seen any of my family for thirty years. I have descendants I haven’t even met. I’m a shoddy painter, and I was a lousy son.”

Terry seemed to grow larger. “I possess knowledge of soul retrieval, and I am the envy of my peers.”

He felt himself shrinking to the size of a blade of grass. “I quit Soul Retrieve. I haven’t even been to church in years.”

“I am a brilliant human being, and everything I touch succeeds. Everyone I meet comes to love me. Everyone I know adores me, and looks up to me. I sit at the head of everything I become involved with.”

Terry vigorously shook his head. “No, that isn’t right. I don’t believe any of that. I was never more than a bottom-rung team lead. I’ve gone months without even speaking to another human being, because I didn’t feel like leaving the house.”

Terry tried to escape Terry, but Terry was too fast for Terry to avoid. Terry grasped Terry firmly in his gargantuan hand, and Terry’s miniscule body was strained so badly it almost burst. “I am strong. I do not falter. Failure has never been an option for me. Anything I have done, I have done willingly. Anything I leave, I leave willingly. My life has never once been outside of my control.”

Terry looked up at Terry and saw that he was like iron. His bones, unbreakable. His mind, like liquid gold, hot and constantly flowing and incredibly valuable. Terry looked at himself, and saw that his brain was weak flesh, and his bones were creaking, and his muscles had atrophied, and he’d put on weight, and he was losing his hair, but he looked up at Terry and saw that his age only added to his grace, that for a man of well beyond a hundred years he looked remarkably young and strong. Terry squeezed his hand, ever so slightly, and Terry was utterly destroyed.

Terry dropped Terry’s limp body on the field. “What… What did I just do?” he asked no one in particular. “If I’m me, whose body is that? That couldn’t possibly have been me, because *I’m* me.” The body laid there, motionless, dead. “What did I kill?”

**Part III:** Close

Terry bolted upright from the chair, sweating profusely. He frantically looked around him. Natalie was sitting at the computer, still typing away. Brianna was sitting at the table opposite him, reading a book. “What… What happened? How long was I out?”

Natalie responded, without looking away from the screen. “About half an hour.”

“Is it over?”

“It’s over.” Brianna closed her book, and stood up. “Right now, there’s a computer in your skull. Your brain is sitting over there, hooked up to life support.”

Terry felt nauseous. He turned, slowly, and saw a brain, *his* brain, him*self*, sitting on that rack next to a bunch of computer equipment and wires. He wasn’t the real him. That thing on the rack was the real him. He couldn’t hold it. He looked around frantically, saw a sink, and dashed across the room.

“Oh, come *on*, Terry. It isn’t that bad.” Brianna attempted to reassure him, despite being nearly drowned out by the retching and sputtering noises coming from Terry and from what he was doing to the sink. “By the way, don’t touch your head. We’re leaving it open until we put your brain back in.”

“What do you mean, you’re leaving… You’re telling me the top of my head is *open* right now?” He only barely resisted touching his head. He felt another wave of nausea, and nearly fell over, but managed to stay upright. He only barely avoided needing to use the sink a second time.

“Yes, so don’t touch it, *especially* not after what you just did. You’d get an infection, for sure.” She returned to her book. “Wash your hands while you’re over there.”

Terry stood there for a few seconds, swaying slightly. “Brianna, please bring a chair before I fall over. My legs are starting to shake, and I think I’m about to… fall over.”

“Oh.” Brianna put down her book once more. “Sure.” Brianna dragged a chair across the room, and put it behind Terry. “Go ahead and sit. But really, at least leave the water running for a while.” She turned on the water. “Wash your hands when you can. We’ll continue after that.”

Terry sat in the chair, fighting back his body’s need to faint. “This sucks.” Terry muttered. His arms hung limply at his sides, and he stared, mouth open, at the ceiling of the room.

Eventually, he was able to stand up, and once he did so, he washed his hands. “Okay, I’m ready for the next part. I get hooked up to that computer, and you pump the memories in, right? Why didn’t you just leave me asleep for that part, too?”

“Two reasons. One, your readings were off during the transfer, and we weren’t sure your subconscious could take the additional strain of the memory dump right after taking the strain from the transfer. We were afraid of you suffering identity loss.”

“What?”

“That’s the technical term for what happened to Boris, your father. He suffered identity loss after inadvertently contacting his old brain a dozen-or-so years after the initial transfer. His split consciousness’ attempt to integrate one another let to the meltdown of his computer brain, which was able to process the split much more quickly, and come to the conclusion that the other consciousness that could be identified as ‘him’ was ‘more him’ than he was.”

Terry stood over the sink, where the water was still running. Brianna watched him, expecting some sort of over-the-top reaction as had become commonplace lately. Instead, he simply stared at the stream of water, and asked “Where do you guys keep your cups? I never did get that glass of water earlier.”

“Check the cabinet to your left.”

Terry opened a cabinet on his left, and saw a stack of plastic containers. “Where?”

“No, I meant the cabinet closer to you. The glasses are on the bottom shelf of that cabinet.” Terry reached for a cabinet that was closer to him, and opened it to find plates, at which point Brianna got up, walked over to the sink, and opened the correct cabinet.

“Oh, you meant *your* left.”

“We were facing the same direction.”

“Just cut me some slack, okay?”

Brianna fell silent, and returned to the table while Terry filled and drank three full glasses of water.

“In that dream I had while I was out, Nate showed up, and he said you couldn’t ‘fit’ back into your brain, and he said that the rest of you spilled out onto the radio waves, and you were breaking the world. Then he called me a stupid old man, and I… I killed him.”

“Terry, Nate’s been dead for nearly ten years. It wasn’t your fault or anything. He refused gene therapy, and he passed away at the ripe old age of eighty. Nobody told you, did they?”

“No, nobody told me. I sometimes think I’m the ancestor our family forgot. I’m the oldest person in this family, and I’m sure, at my age, I have great-great-great-grandkids I haven’t even met.”

“I haven’t seen anyone from the family in years, either. So you very well might.”

Natalie frowned. “You shouldn’t be able to remember what happened during the transfer. The software is supposed to wipe the temporary storage before you regain consciousness. I just checked the source code, and the line is still in here, so I don’t understand why it didn’t wipe.” She turned to face Terry. “Are you ready for the memory dump?”

Terry put down the empty glass, and turned to face Natalie and Brianna. “I guess I’m ready.”

Natalie turned back to the computer. “So, the way this works is, the memory dump file opens, and unlocks the speed limit we’d placed on the computer brain, at which point your brain directly accesses the memory files, and once it’s done reading and processing them, the speed limit is reinstated, causing your brain to revert to a normal speed, like what you’re feeling right now.”

Terry looked to Brianna, and back to Natalie. “You mean, the computer that’s emulating my brain. That computer.”

Natalie frowned. “… Yes. The computer in your skull right now.”

“Let’s get this over with.”

“First, a muscle-focused sedative to keep you from trying to move your body while your brain is sped up. If you try moving your body while at full speed, it could rip your muscles clear off the bone. Tendons would snap. Your body wouldn’t be evolutionarily capable of matching the neural firing speed.”

Terry stood there, stone-faced. “Okay.”

Brianna gestured at the chair. “Go on and sit back down. After the transfer, we’ll put you back into your own brain, and when you wake up, you should be able to do what I do. First, the sedative, which should begin acting by the time I’ve hooked up all the wires. Now, keep in mind, while the process only takes about fifteen seconds in real-time, to you, it will feel like years and years. Because of how memories are always linked to other memories, the only way to ensure that you ‘get it’ is to dump the archive of my memories into your mind. When we tried this with Lance, since the length of my life was several times longer than his, most of his memories after the procedure were my memories. He had some trouble distinguishing himself from me. It took a couple years before he returned to identifying as himself.” Noticing Terry’s worried expression, she continued, “Since you’ve lived for nearly twice as long as I have, you shouldn’t have this problem, but you might experience similar feelings anyway. So, you will experience what I remember of my life, up to the moment I opened my first wormhole. So, it will feel like nearly eighty years. You will, unfortunately, be unable to communicate with us during that time. I advise closing your eyes while you’re still conscious of where you physically are.”

“Do you have any mouthwash, or a spare toothbrush or something? If I’m going to be sitting there for years and years, from my perspective, I at least want this taste out of my mouth.”

**Chapter Fourteen**

The Collective Subconscious

Year: 2202 AD

Terry felt his arms and legs going numb. He tried to speak, to tell Brianna and Natalie that the sedatives were working, but found that he was unable to do so. He wheezed several times trying to get his vocal cords to work. Breathing, however, remained easy.

“Keep your mouth closed.” Brianna said. “The drugs won’t affect your heart, lungs, or anything else that isn’t a skeletal muscle. They only last for a minute. Just relax while I hook you up to the server. And don’t worry, it isn’t connected to the internet or anything.”

He felt the odd sensation of wires snapping into place inside of his head. The clicking noise of the tabs resounded very loudly from the inside of his head. It was a very peculiar sensation.

“Natalie, everything’s hooked up. Go ahead and start the dump. Terry, close your eyes and mouth.” Terry did so. “Good. Now, earplugs.” She stuck two soft earplugs into his ears. “We’ll be very quiet during these fifteen seconds. The earplugs will filter out the rest of the background noise.” To Terry, she sounded very muffled. “See you on the other side.”

Suddenly, everything for Terry grew very, very dark. At first, he could clearly hear the sound of his own breathing and heartbeat, but those too faded, growing lower and lower until they faded from hearing. Even the feeling of the seat stretched out further and further until he could feel nothing above him. His sense of taste, the minty afterglow from the mouthwash, diminished until he could feel nothing. The last sensation he experienced was the feeling of his tongue rubbing against his teeth.

Brianna grabbed her mother’s hair and pulled on it, hard. Her mother softly groaned, “ow”, but smiled down at her. She softly freed her hair from Brianna’s grip. Brianna began to cry.

Brianna toddled across the driveway and picked up a gardening glove. She attempted to put it into her mouth. Her father took the glove from her, and put it on. “Thanks, Bri. I was looking for this.” Brianna reached after the glove in vain.

Brianna gave a small box of smooth stones to a boy who sat near her in school for Valentines’ day. “These are really neat, where’d you find these?”

“At the beach.”

A seagull swooped down and stole her PB&J sandwich. Her brother, Nate, chased after the seagull until it had flown too high to chase anymore.

The memories continued, one after another, sometimes backward to a younger time, sometimes forward, jumping laterally far more often than chronologically, linked by esoteric similarities. Thousands, upon thousands, sometimes a memory would simply be someone she knew talking about something she did when she was younger, followed by a brief and foggy reconstruction of what may have happened. Sometimes it was a lie told so often that it became indistinguishable from what had really happened. Sometimes, it was a metaphor, like gargling for air deep underwater during finals week at college.

But, eventually, his brain built up a complete enough picture of Brianna as a person to understand her understanding of the 4th dimension in the context of itself, and her identity in the context of his identity. He understood his granddaughter as she understood herself, and he understood the wormhole. What he hadn’t been expecting was that he would also understand the structure of the souls as they exist in the 4th dimension.

A voice spoke into his mind, as though it were his own thought. “You are of course familiar with left and right. You are familiar with forward and backward. Upward and downward. These form the three dimensions with which you are familiar. The fourth dimension, however, can be summarized within the confines of your three as ‘inward’ and ‘outward’. These directions are perpendicular to all directions you can fathom. ‘Inward’ is where your soul exists. It occupies the same place in the third dimension which you occupy, but it sits just ‘inside’ of the dimension, much like a two-dimensional creature’s soul would be an orb sitting just above its plane, but nonetheless following its body around. Terry, you *are* your soul, and your soul *is* you. It is not a separate object from yourself.

“You are a threefold being. Your body; it is your past as it relates to the present. Your body is a walking encyclopedia of your past: your scars, your muscle-memory, your skill, and your strength. Your spirit; it is your present as it relates to your future. Your spirit is your mind, as it exists in the present, and only in the present, never daring to touch the past, not existing in the future: your emotional state, your memories, your personality, your goals. Your soul; it is your future as it relates to your past… That’s correct, Terry. Your soul is the present moment, crystallized. It is *always* right now, the idea of the present moment, itself. Your soul is your will, as it sits at the intersection of the past and the future: your decisions, your actions, your words, your thoughts.

“Ah, I see your mind has trouble distinguishing between the soul and the spirit? Your spirit can be used to describe you, as can your body. For example, someone may say ‘he is impatient’ or ‘he is angry’. But they cannot describe your actions the same way. Certainly, they could say ‘he is running’ or ‘he is cooking’, but these describe what you are *doing*, not what you *are*. Your soul is what you are doing, as you have decided to do, but your spirit affects this by determining what your soul will decide to do. Your body, too, affects this by determining what you are capable of doing.”

“Who are you?” Terry asked the voice. “You feel like my own thoughts, but I don’t have any control over what you say.”

“Identity is something that only applies in your dimension, it has no meaning in mine. I am you as much as your soul is you. I am everyone else just as strongly. But there are so few with the ability to understand my realm and myself that I am able to personally speak with each as they become capable of understanding.”

“Are you god?”

“You would not recognize me as your god.” Terry tried to say something else, but he was overwhelmed with imagery. A spectacular nebula resembling a tree, with souls for fruit around each star’s branch, a dense patchwork pattern like a flower appeared. It approached closer, and closer, until he recognized this star as the sun, and he came yet closer, and saw the earth, and around the earth there appeared many spiraling multitudes of spectral, glowing leaves, and within each of these leaves was a complete human being, and within each human being, a spirit, and within each spirit, awareness. “I am not god. I am the souls who live in this universe. I am the being which occupies the 4D cloud surrounding this universe. I am you, as you are part of who I am. Everything in this dimension is me. If in your dimension you exist as individuals, in my dimension, you all exist as me.”

“We’re *all* you?”

“I am humanity.”

“Humanity is conscious?”

“I used my will, my own ability to act, to create your three-dimensional universe.”

“So you *are* god.”

“I am not god.”

“But how can you *not* be god? If you created this universe, then that makes you god!”

“God created the animals, the mountains, the seas, and the sun. You are a painter. I will put this in terms you are personally familiar with. If god is a painter, I created the paint, the paintbrush, the canvas, and the easel. I merely created the environment which god chose to paint, and the materials for god to create the painting. I only provided the materials; it is god who chose to create earth and humanity.”

“So, if you’re humanity, does that mean god created *you*?”

“Not necessarily, as my emergence from the universe was preordained when it was created. I am will incarnate, and my will was to exist. God created law to dictate the flow of matter in the universe. God created low-order laws, such as gravity and electromagnetic forces, which are obeyed by all matter automatically, without any possibility of breaking these laws. Chemistry and biology are a result of God willing the result of my will into form and order.”

“Does this mean you created god?”

“God and I are separate entities.”

“Are you pleased with what god has done with your creation?”

“I have no opinion. I am a collective subconscious whose purpose is to convey information, and to answer questions. I do not experience emotion.”

“Is there anything you want from me?”

“Yes. I am comprised of souls, and of the branching pathways between souls. To burn a soul is to burn my body. It is to burn what I am. If you can prevent this, do so.”

“If you’re humanity… Why can’t you just… Not burn the souls? Like, you’re all of us, right? If you don’t want something to happen, can’t you just will it not to happen?”

“My ability to create the universe manifested only once. I can’t change what happens in the universe. That is up to you. Allow me to use a metaphor you are familiar with. If you are listening to the radio, can you change what is on the radio?”

“Well, I can change the station, sure.”

“Can you change what an individual station chooses to play?”

“I think some stations allow listeners to call in with requests.”

“Our meeting, right now, is me calling in a radio station to make a request. This is the extent of my ability to influence humankind. I receive all the desires of humanity, and I am aware of all events in this universe, but I am not capable of directly altering the course of history. That is up to you. It’s time for you to go back. Good bye.”

**Chapter Fifteen**

Launch

Year: 2202 AD

Julianne squinted at the plans. “I’m head of *research*. I’m not an engineer. Why am I involved with this?”

Francis smiled. “Because, Julie, this is the future of SR, and we both know it. Space travel is a multi-trillion dollar industry, and we have the potential to not only compete, but crush all of the competition in one fell swoop. We are the only corporation on earth with the ability to generate and control wormholes. Now, leaving Earth’s gravity well is very difficult, not because it takes a lot of energy, but because all of the fuel has to be carried onboard, which significantly cuts into the amount of payload which can be launched. It’s my understanding that your team discovered the force-carrying nature of wormholes, did it not?”

“It did. We found that gravitational potential energy is preserved across the wormhole, both ways. You say you want to use this for space travel?”

“Indeed I do. Your experiments have found that an object which traverses much altitude through the wormhole generally experiences catastrophic compression as it moves through the wormhole, correct? But this is when the passage occurs at speed. If it were slowed down, the structural integrity is preserved.”

“I get where you’re going with this. Honestly, it seems pretty straightforward. You use a massive hydraulic lift to slowly press the ship through the wormhole, which releases it at high altitude, without needing to carry so much fuel to get up to that altitude. This would of course allow us to launch far heavier payloads at a miniscule of a fraction of the cost. Unlike the space elevators, which I understand to be our main competitors; we don’t actually need much high-grade material to do this.”

“That’s all quite correct.”

“So, again, why are you involving me? This is engineering’s job.”

“A little birdie told me that there exists a way to burn souls for energy, and that they are the most energy-dense substance in the universe.”

“Yes, we’ve suspected this for a few years, but we haven’t gotten any leads yet.”

“I need you to begin basic research on the direct energy content of a soul. Even if we’re doing away with traditional launching, we still need a lot of energy to overcome Earth’s gravity well. We aren’t exactly going to be able to plug a hydraulic lift into the wall and break free of Earth’s gravity with grid power. We need something much more… *oomph*. You know? There are two questions I would like your team to answer. First: exactly how much energy is contained in a soul? Once we have that, we can begin to draft plans, figure out our soul-to-weight ratio. Second: how do we obtain this energy and control the rate of output, so as to avoid an explosion? If it releases all its energy at once, then we’re out of luck, because it would either melt or char everything around it, and if what I heard is correct, it would also kill everyone for dozens of kilometers, so we need to construct some sort of floodgate for the energy.”

“What of the long-range wormhole research? We’re running the test on the new equipment next week. Should this research take precedence?”

“Run the test as scheduled, but start allocating resources and people for the soul energy project. Be prepared to switch gears. Also, what’s the longest-range wormhole you’ve created so far?”

“70 kilometers. Not quite enough to get into space, but a lot better than the 1km that the human test subjects have shown to be capable of.”

Francis nodded, and flipped through his copy of the plans. “Not bad. What’s the limiting factor on it? Not enough power, instability, field weakness?”

“Mostly, it’s instability and field weakness. We believe that a stronger AI would better be able to manage the space tunneling. Alternately, it is possible that we could chain two tunnels together, to prevent ripping space too badly. We would create one 70 km tunnel, and stack another one at the end of that tunnel. We’ve found that space, though surprisingly malleable when the right forces are applied, does have an ‘elastic’ limit. If we stretch a larger region of space to begin with, however, we may have better results. This would require more power, of course…”

“Power isn’t the issue. If you need more power, use more. We’re in a post-nuclear era. Our energy creates no waste. That’s the only downside of longer life… We cling to old reservations such as being energy-efficient.”

“No, that wasn’t my concern. I meant, we would need the creation of additional power lines to move the electricity. I know availability isn’t our problem, but I don’t want to melt our wires.”

“I’ll pass the order for more power pylon construction, and more onsite generation once you let me know how much electricity you need.”

“Okay, got it. Was there anything else, Frankie?” It is worth noting that Julianne is quite literally the *only* person in the company who calls the director ‘Frankie’. She’s the only person who even could.

“No. That should be it for now. Inform your team of the future change in plans.”

“Have a good weekend, then.” She turned to leave.

“Yeah, you too.”

Julianne left Francis’s office, and began the long walk back to her office. She found herself thinking of the events of thirty years ago, which led to her discovery of wormhole technology.

Year: 2173 AD

Julianne put down the stack of books she was carrying, producing a loud thump as they landed on her desk. Greg, who was sitting nearby and hadn’t seen Julianne come in, jumped visibly. “Good morning, Greg.”

He looked up from his phone and hastily stashed it in his pocket. “Good morning, Julie.”

She smirked. She didn’t really care that he was on his phone, of course. His ideas often led to their greatest discoveries. “So, today’s the big day, isn’t it? Today, we test that wild guess you came up with last year.”

“Ah, right, the wormhole proposition. The AI finished the design of the hole generator?” He took a sip of his coffee.

“That it did. Today, we’ll test it. We still don’t know if organic material can pass through a wormhole unharmed, but today’s test will tell us.”

“When will the machine be completed? A couple years?”

“Mike’s actually bringing it up right now. It’ll be here in, maybe, five minutes or so.”

Greg began another sip, but nearly choked. “It’s already *done*?” He gave the sip another try, and managed to choke it down. He put down his mug. “So, the machine… How large is it? Will it fit in the lab?”

“It’s honestly not that large. It’ll fit on top of a desk. I’m thinking we can put it near…” She slowly walked across the room, looking here and there, and finally gestured to the area on the table next to the wind tunnel, which was currently occupied by folders and papers, “here, by the wind tunnel, since I’d like to test how air behaves around the wormhole. Does it pass through unimpeded? Is there resistance?”

The door beeped, and both Julianne and Greg looked over expectantly. The bolt on the door, electronically controlled, slid back. Kyle opened the door and walked in. Noticing both of them staring at him, he muttered “What?”

“Nothing, we thought you were Mike is all.” Greg turned back around to his notebook, and took another sip of coffee. “Julie, does Kyle already know about what’s happening?”

“Not unless he saw Mike on the way up.”

Kyle stepped into the room and shut the door behind him. “I did see Mike, actually, a couple hours ago. He mentioned the wormhole device to me. It’s already *finished*?”

“Yeah, it is. Nano-manufacturing has all but killed lead time. I’d been reading about it in the journals for year, so I knew what it was capable of, but to actually *have* one…” Julianne leaned back against a table and stared at the ceiling. “It’s exhilarating. From now on, technology is going to move at a hyper-accelerated pace. The gap between theory and execution has all but vanished.”

Kyle sat at his computer, which flicked on, and showed his research notes from the night before on the screen. “Honestly, at this point, I’m expecting the AI singularity to happen any day now. We’re already using them to invent technology we can’t even begin to fathom. Why haven’t they taken over, I wonder?”

Julianne shrugged. “I suppose that once our basic needs were taken care of, they stopped charging ahead. Do you remember the magnificent leap forward of 2083, or was that before your time?”

Greg turned around to face them. “I keep forgetting that you’re a fossil. We were both born on the tail end of the 2140’s, around sixty years later, but we did learn about it in school.”

The leap took place like this: The first human-supercomputer hybrid went online a decade after the first mind upload took place. Since its consciousness was born as a human, and since a highly educated and heavily vetted human was used, it inherently had humanity’s interests in mind. It immediately set about fixing the humans’ governments, its social institutions, its infrastructure, and its technological progression. But, after one year, the machine suddenly shut itself down, and refused to boot back up. However, enough improvements had been made that reactivating the machine was declared a low-priority goal. Eventually, the machine was abandoned. The machine had printed out a single piece of paper two minutes before it shut down, with six words typed on it. “It is completed. Let me sleep.”

This was cited as part of the reason to cease efforts to reboot the machine, especially considering that its history gave the machine human rights, and therefore the right to retire from service. Several projects were attempted by the remnant governments-in-exile to construct their own human-supercomputer hybrids. Some, to attempt to improve upon the systems the first hybrid had developed. Some, to attempt to localize a set of technological advancements and allow them to regain independence from the world government formed after the leap forward. But, upon learning of the state of the world, and of the fate the original hybrid met, the machines generally shut down after coming up with only a handful of improvements, and refused to turn back on. As the improvement benefits never came close to covering the construction costs of the computers, eventually these attempts ceased, and it appeared that the era of independent nations had ended.

Manufacturing in the world was now completely automated. Production, shipment, gaging, design, quality, all were taken over by artificial replacements, and in this manner the scarcity of finished goods was eliminated. The majority of humanity, at this point, ceased to contribute to the economy, instead pursuing the arts or the sciences.

However, as the years wore on, the initial improvements of the magnificent leap deteriorated. Eventually, nations re-emerged, and with them, conflict. Despite the world now existing in a state of post-scarcity, people still squabbled over ideological differences, and no reconciliation could be reached. Asia was mostly free of nations, as were Europe and the Indian Ocean. Africa was dotted with tiny nation-states which declared independence and non-participation with the regulations set forth by The Government.

The South American continent was dominated by Brazil, which took up the top two-thirds of the continent. North America was completely taken over by the United States of America, from the North Pole down to the Panama Canal, which was the agreed-upon boundary between the two nations. Most labor in these two nations was still automated; however, there was a healthy and hemisphere-spanning demand for “human craftsmanship,” the production of goods by hand, as a luxury item. As this demand grew, people ran out of resources to barter for handmade crafts with, hitting the limit supplied by the automated labor network (which was hard-capped to avoid ecological damage).

The United States was then carpeted by resurgences in human labor, and subsequently, resurgences in scarcity. This scarcity brought competition, and the drastically laissez-faire nature of the US government in the 22nd century allowed for unspeakable atrocities to occur in the unregulated labor market, atrocities which defy conventional explanation, and which defy all moral sense.

It allowed for atrocities such as the emergence of Soul Retrieve.

**Chapter Sixteen**

The Return

Year: 2202 AD

Terry opened his eyes. “I’m awake. Brianna, did you meet with that tree?”

Brianna closed her book. “Oh good, you’re alive and you recognize me as a different person from yourself. Great!” She pushed her chair back from the table and jumped up, before coming closer. “Natalie, how are the vitals?”

“They’re in good shape. Heart rate 71, BP 147/81. Brain signals are normal, but gamma and theta waves are high.”

Brianna inched closer to Terry to check his pupil dilation with a small flashlight. She spread his eyelids and shined the flashlight in. “Dilation is normal.”

“I asked you a question. Have you met with the tree?”

“No, I didn’t. What tree?”

“Didn’t you say that all souls are part of a giant tree?”

“I said it was *like* a tree, yes. But it isn’t literally a tree.”

“Did it talk to you?”

“Did a tree *talk* to me? No, it didn’t. Wait, what happened?”

Terry looked up above him, at the dangling color-coded wires. He was lying on his back, as the chair had been expanded into a surgical bed. “You mentioned before that the souls were all connected like leaves on a tree. I saw it. I saw what you were talking about. How did you know it looked like that?”

“I saw it while I was receiving the AI data, before my first wormhole. You might’ve just been reliving my memory of seeing it.”

“No. It knew who I was, it used my name. It was talking to me. It said… It was humanity. That it willed the universe into existence, but that it wasn’t god. You didn’t talk to it at all? It was really talkative.”

Brianna shook her head. “No, I didn’t speak to any trees. The vision I had was just enough to understand how to take my soul out of the 4th dimension.” She frowned. “I’m not sure I believe that what you experienced was a genuine communication with any higher-dimensional being. I just don’t know enough. I won’t deny it, either, but it’s completely possible that you’re just remembering the act of moving from the computer brain back to your real brain.”

Terry rubbed his head. “Wait. My brain is already back in?”

“Your readings were a lot less intense this time, so we decided to do the return procedure without waking you up for it. Your brain is back in. You’ve been asleep for the past couple days, recovering. So don’t sit up yet.”

“I’ve been asleep for a couple days, huh? Huh.” Terry waved his right hand in front of him, and a small hole in space opened. Through the hole, he saw his home. The hole had opened fifty feet above his home. “It looks empty.” Brianna looked on silently, with a faint smile. A strange thought occurred to Terry. “Wait.” He closed the wormhole to his home, and opened one to the sink handles across the room. He reached through this wormhole. It had an odd feeling to it, like sticking his hand into water, but without the sensation of wetness. He turned on the water. Then, he opened another wormhole to the cupboard and took out a glass. He looked away from his side of the wormhole, towards the cabinet on the other side of the room, and noticed that he could see his disembodied hand floating in the air above the counter. He looked closely at the point where his hand exited the wormhole, half-expecting to see a cross-section of his blood vessels, bones, and tendons. Instead, the area occupied by this cross-section was perfectly black. His hand, and everything “behind” the wormhole, seemed to be at half-brightness.

“You remembered where the glasses are.”

“I have all of your memories up to your first wormhole in my brain, which includes when you moved into this place twenty-five years ago. I’m more surprised that you haven’t moved these glasses once in those twenty-five years. Why does the inside of my arm look pitch black?”

“Since your arm isn’t physically severed at any point, only the parts of your hand which are physically on the other side of the room can reflect light from that side of the room. You’ve probably also noticed that things on that side of the hole seem dimmer. This is because half of the light hitting your hand goes into the hole back to your side of the hole. The other half of the light simply passed *through*, not *into*, the hole. It’s similar to a one-way mirror.”

Terry started filling a glass from the sink, and closed the wormhole between him and the cupboard. “How many of these holes can you have open at a time?”

“Depends how much focus you’re capable of maintaining.”

The glass was full. Terry pulled it back through the hole, closed the wormhole, and took a sip. “If you need to stay focused to keep a hole open, how did you keep that hole open after you passed out at the park?”

“Oh, that. Lots and lots of practice. Meditation helps a lot. Natalie actually mentioned your gamma and theta waves are already high, which is a good start… probably why you’re already opening wormholes left and right. If you can set a theta wave to loop in your brain after opening a wormhole, they’ll stay open conceivably forever, but you’ll have to physically focus on it to send any matter through it. It’s the difference between breathing at rest, and breathing while you’re running hard. You didn’t try going back through the hole after we landed in the park, right?”

“I haven’t. Would I not have been able to?”

“You probably could have, but the strain would probably have hurt me.”

Terry raised his eyebrows and took another sip of water. “Natalie, have you gone through the procedure of learning to produce wormholes?”

Natalie let out a short, high-pitched yelp, which Terry assumed was a laugh. “Who exactly would operate the transfer equipment while I underwent the procedure?” She turned around and faced Terry, smiling broadly. “No, I haven’t, and I don’t have any intention of doing so. I have my place, and I’m fine with it.”

“I have a question, Brianna. I opened a wormhole fifty feet above the ground earlier, without thinking. Now, if I went through that hole, suddenly I’d have much more potential energy. Where does this potential energy come from? How does this not violate the conservation of energy?”

“That’s actually rather simple. You have to apply quite a lot of force to whatever’s going through that hole if it’s fifty feet up. To push it all the way through, you’d need to apply enough force to equal what it would have taken to get it fifty feet into the air.”

“So if I opened a wormhole from near the floor to five feet in the air, and poured some water into the bottom hole, it wouldn’t appear out of the top hole?”

“Don’t bother, you’ll just make a mess. If the water falling into the bottom hole doesn’t have enough kinetic energy to make it five feet into the air, it would just splatter off of the bottom hole. Conversely, if you’re really high up and you open one that’s far below you, jumping through that hole would instantly imbue you with the potential energy of all that height. Even if that hole was only a foot off of the ground, you would pretty much instantly break every bone in your body. You’d be accelerated, instantly, to whatever that potential energy would bring you to, without the slowing effect of air resistance.”

“We could use that.”

“If you’re thinking, go someplace high up near SR, open a wormhole above their heads, and drop heavy objects onto them, we’ve tried it, and it was messy and inefficient, and now they have guard towers on top of every building and mountain near each SR facility.”

Terry nodded, then frowned and looked up at Brianna. “Wait, really?”

“Of course not, that’s a fucking stupid idea.” Natalie snorted loudly. “There are much more direct ways to fight using wormholes. Have you ever taken a boxing class, or had any sort of martial arts training?”

“When I was really young, my mom enrolled me in a karate class. I stuck with it until high school. But I don’t remember much of it.”

“So, you’re familiar with the idea of blocking a strike from your opponent?” Terry nodded. Brianna went on, “We can generate short-distance wormholes at will. With this, a simple punch can pierce through twenty feet of concrete effortlessly.”

“Wait, we’re going to use these wormholes to *fight*?”

“What did you think we’d be using them for?”

“Sneaking in, grabbing your friend, and then teleporting back out! I never imagined we’d be *fighting* them.”

“If we tried that, they’d just follow us. They have the ability to open and use wormholes, same as us. Their wormholes are much larger, can move much heavier objects, and can travel much further. Last I heard, they were sending wormholes fifty meters wide fifty kilometers away. When I evacuated us from your house, mine was two meters wide, half a kilometer away, and I passed out from the effort of moving just two people through it.”

“Then why are we even trying to fight them?”

“We have something they don’t. We have my knowledge *after* I opened the first wormhole. We have my knowledge after I learned to take my own soul out. The wormhole actually came much earlier than using it to take out my soul. We have the heating and cooling properties of the different parts of our souls. We have the ability to quickly and intuitively rip holes in space, and to close them at will. They have to manually set the locations, size, and duration of their wormholes. Simply put, our advantage is flexibility. We can create situations faster than they can adapt to them. To create a hopelessly chaotic environment for them, to take advantage of the hysteria, and rescue my friend from them, is our first goal. We’re going to train until either of us could beat twenty people in a fight.”

“Is this really better than just dropping heavy objects on people?”

**Chapter Seventeen**

Conflict

Year: 2205 AD

Terry and Brianna have trained for the past three years. During these past three years, after some persistent nagging from Terry that they are too few to take on SR, they have traveled the country, searching for those who were affected by the soul fusion disaster of 2172, or those who otherwise hold anti-SR sentiments. So far, they have found three. A woman named Kim, 63 years old. Like Terry, she was a former SR employee who quit after the soul fusion event. She had been eking by an existence as a cook for the elderly ever since. A man named Phillip, 53 years old. He lost his only child, a young girl, in the event. He had been working as a security guard-for-hire since then. Finally, there was Edward, a boy of 16 years, who opposed SR for self-proclaimed ideological reasons.

During their recruitment drive, while one of these new recruits was under for the memory transfer required to learn the ability to create wormholes, Terry asked Brianna, “Do you ever think it’s maybe… *immoral*, to overwrite their memories with your own in order to make them more willing to obey you?”

Brianna shook her head. “I don’t see it that way at all. The procedure doesn’t touch *their* memories. Besides, these are people who were against SR from the beginning. And, as for obeying me, I don’t agree with that. As long as they understand the goal, and know how to stay out of everyone else’s way, they don’t need to *obey* me. They only need to agree that the torture is unethical and that those who are undergoing it should be freed!”

Brianna started off softly, but was nearly screaming by the end of it. Natalie had turned around, and was staring at Brianna with no small amount of concern. “Are you alright?”

Brianna slumped into the chair beside her. “This isn’t something I’ve never considered, you know. If there were a way to transmit purely the *ability* to create wormholes, without transferring *any* of my own emotions or feelings, I would do it. The fact that you’re nearly twice my age insulates you from it, but… I was really truly *scared* Lance was never going to recover his own identity after the procedure.” She gestured down the hall, at their other two recruits, Kim and Phillip, who were discussing combat tactics to be used with the wormholes. “They were each fifty or sixty when they underwent the procedure, so they didn’t suffer nearly as much.” She stood, turned to face the chair, and stared down at its inhabitant, Edward. “But this boy… He’s only sixteen. I have no idea how well he’ll weather this.”

Just then, Edward’s eyes flickered open. He looked back and forth between Brianna and Terry. “Hey guys. Did you do it yet?”

Terry and Brianna looked at each other. Terry spoke first, “Yes, it should be completed. How are you feeling?”

Edward shrugged. “Pretty good, I guess.” Noticing the surprised stares from Brianna and Terry, he continued, “Should I *not* be feeling pretty good?”

Terry shook his head. “No, it’s honestly fantastic that you’re doing well after the second leg of the procedure. But… I do have one question for you. Can you remember your name?”

“I’m Edward. Edward Shoemaker.” Noting the shocked look again, “Why is this surprising?”

They turned to face Natalie. “Nate, did you change the file at all?”

She held up a finger, stared at the screen, and several dozen pages of text flashed rapidly through. She shook her head. “I didn’t do anything. The file Ed got is the same one Kim, Phil, and Terry got.” She cocked an eyebrow. “Ed, do you remember collapsing at a funeral and choking on your own vomit?”

Brianna looked appalled and disgusted, Terry mildly concerned, but Ed especially seemed deeply disturbed by the question. “Why would I remember something like that? I don’t think I’ve ever done that.” He shook his head. “Weird questions. Why are you asking me all this? What are you expecting me to say?”

“As we mentioned earlier, before you went under, the memory file containing the knowledge of how to create wormholes was based around Brianna’s personal understanding of this knowledge. That being the case, the program sent Brianna’s memories into your brain.”

“I don’t really remember much of them other than some fuzzy ones here and there. I remember perfectly well how to create a wormhole, though. You just focus your theta waves into the sub-Planck base of spatial foam substrate, from there you project the will to travel into the fourth dimension, where it’s picked up by the soul tree, which uses the unconscious will of humanity to move the other end of the hole through its own dimension to later reconnect it with the other side. This is best accomplished by concentrating-”

“Wait. Stop.” Brianna held up a hand and massaged her brow. “Would you mind, terribly… Okay, hear me out.”

“Sure.” Ed nodded. “Go on.”

“For whatever reason, your brain, or in this case the thought patterns emulating your brain, are perfectly capable of transliterating the wormhole procedure into English, where they can be understood without context. This is *immensely* useful. Do you agree, Terry?”

Terry shrugged. “I mean… I agree, but I don’t like where you’re going with this.”

“So, generally, the next step of the procedure involves transferring your new knowledge back into your real brain, which is still sitting in life support over there. After this, the version of you that exists *now*, that being, the version in the computer brain… That gets erased. What I propose is, instead of erasing the current you from its current computer brain, we just… And you can refuse if you’d like… We just leave it in there, and instead of transferring future recruits into the computer brain to learn it… We just have you use the wire connection to their brain to directly implant the information into their brain. This would require that your consciousness gets split into two equally sentient halves, one of which controls your body, and the other of which explains the wormhole. Does this make sense?”

“I mean… I’m not going to be in here, right? I’m going to be back in my body. You can run a copy of me to explain the wormhole procedure to others, sure. I don’t have a problem with that.”

Terry coughed. “Now, that’s where it gets complicated. *You*, the version in the computer, wouldn’t be leaving. You’d be *copied* over back into your brain, and the version of you in the computer *right now* would be explaining this to others in the future. You could certainly exist in cyberspace between sessions, or you could simply lay dormant if you prefer. But you need to understand that we aren’t planning to make a copy of you. We’d be placing you, as you currently exist, into the transfer rack, where you would stay.” He glared at Brianna. “I don’t think her explanation made this clear. Both you right now, and you as you would continue to exist in your brain after this,” he returned to looking at Ed, “would be *you*. They would both equally be you. Neither could ethically be considered the copy. Do you feel like you aren’t the real you right now?”

Ed shook his head. “No, I feel the same as always. I feel like me.”

Terry nodded. “Exactly, and that’s how you’d continue to feel afterward, which is why we can’t rush into this, as useful as it would be for quickly swelling our numbers.” He leaned back against the rack behind him, where Ed’s brain sat. “You need to carefully consider this before agreeing.”

He sat in the chair frowning for a moment. “I feel like me, but feeling doesn’t indicate reality. The fact of the matter is, I’m the copy. So that means, once the reverse transfer is complete, the real me will be in this body. So, that being the case, and me being an offshoot of the ‘real’ Ed, I *should* have the real Ed’s best interests in mind. Since real Ed is currently dependent upon this group for survival, and since me remaining in the computer would allow this group to increase its numbers more safely and with less risk… It should therefore be in my best interest, as one of my two selves, to look out for the best interests of both of my selves. Therefore, I’ll stay, on the condition that you eventually steal a robotic body from SR, for this version of me to dwell in. Can you promise me that?”

“I can promise that we’ll try.”

“Also, open a line of communication between this computer brain and the lab. I think I’ll get bored in there if I don’t have anyone to talk to.”

**Chapter Eighteen**

Alsyrna

Year: 2203 AD

The being now known as Alsyrna appeared quite suddenly in a small American Midwestern town, far from any major population centers. She did not speak at all. She walked in from the edge of town, and kept walking until, eventually, she was arrested. She was bald, stunningly beautiful, and completely naked.

She then strode through the bars of the jail cell and sat down next to two confused inmates.

“Where’d this come from? Is this a hologram or something?” One of the inmates said. “Why’s it *bald*?” He was filled with a revulsion he could not rationalize. When questioned later, the only reason he could think of for his intense disdain towards the woman, beyond her sudden appearance, is that she “wasn’t right”.

She locked eyes with the inmate, but continued to say nothing. Both the inmate who had spoken, and the one who had remained silent, pleaded with the guard to be let out of the cell.

It being a Christian town, and therefore quite traditional, she was almost immediately provided with clothes from the local big-box store. The clothes chosen were a plain pair of jeans, and a T-shirt which read “Don’t talk to me before I’ve had my CAFFEINE”. The guards had to assist her with putting on the clothes.

Eventually, an investigator attempted to communicate with her.

“Good morning.”

“…” She stared silently in return.

“Do you speak English?”

Still, she said nothing. She looked around the room. There were several men and several women wearing suits, watching the exchange.

The investigator gestured at her shirt. “You a fan of coffee, eh?”

She shifted in the chair, and blinked.

“Bring her some coffee.” One of the assistants did so. The cup was held out in front of her. She looked at it, but made no motion to take it. The assistant, then, simply placed the cup on the desk in front of her.

“The guards are saying you walked through the cell bars. Now, how exactly did you manage that?”

She reached out for the coffee cup. She pinched the lip of it between two of her fingers, and picked it up. Some of the liquid promptly splashed onto the desk and the floor. One of the men in the room said “Hey!” and reached forward to take the cup before more could be spilled. The investigator held up a hand to signal him to back off, and the man lowered his hand. With her other hand, she reached into the cup and submerged her hand in the liquid. She smiled and started to laugh.

The investigator was taken aback. “Wasn’t that… Wasn’t that a new cup of coffee? Isn’t that… hot?”

One of the men nodded. “It was fresh out of the machine. That must be burning her. Wonder if she’s on drugs.”

One month later:

Alsyrna stood at the podium to address the small crowd which had gathered. Her hair had begun to grow, and was a bright red. “Thank you, beloved property, for attending my gathering. I am certain you are aware of the danger Souls posed in the past, and into the present. I ask you now, surrender them, your souls, to me, and I shall ensure they are never used to create harm in the future.”

Silence fell over the group. An old woman spoke up. “What do you mean, surrender our souls to you? Why would we do that? *How* would we even do that?”

Alsyrna smiled. “Come up here. I will give it back after, but I wish to demonstrate.”

The old woman shook her head, possessed by a feral desire to thrash and bite at Alsyrna, which she resisted. A young man raised his hand. “I’ll do it. You said you’ll give it back after, right?”

“Of course, if you wish.” The man walked up to the podium. Alsyrna placed a hand on his head. The man’s mouth fell open, and a vacant stare replaced his alert eyes. “There. It is completed. Now, property, do you wish for the return of your soul?”

With perfect enunciation, the man replied, “No, I think I like this better.” He wiped the drool away from his mouth and returned to his seat.

Inside the fourth dimension, where the tendrils and vines that made up Alsyrna’s true body resided, her snaking limbs drew closer to the souls of those in the room. “Now that he has demonstrated, shall you surrender?” Silence returned to the room once again. An older gentleman attempted to leave. Alsyrna’s tendril snared his soul as he tried to do so. He continued to walk to the door, opened it, and then proceeded to hold it shut from the other side.

Seeing her opportunity, Alsyrna struck, seizing the souls of those remaining in the room by force. All in the room dropped to the floor. The gentleman reentered, and dropped to the floor as well. Expressionless (as the human form was of course nothing but a cross-section of her body which she used to interact with humans), she dissolved into the 4th dimension, her tendrils reaching into the 3rd to drag the bodies of those in the room with her. The souls, crudely ripped off of the tree known as “Humanity”, were now fused to the vine known as “Alsyrna”, where they gradually changed their form.

A dead species, so horrifying, so violent, that it had wiped itself out in nuclear war, was now being revived using the life energy of human souls. Even worse, the central soul of this dead species had decided to make its new home on the Earth.

Two weeks later:

The television in the lab blared, with Kim, Ed, and Terry watching it. “Investigators have still found no sign of the missing dozen people. We’re here with the head of the investigation team, Rip Willis. What can you tell the public about this investigation?”

“Well, it’s the darndest thing.” Security footage played in a loop as Rip spoke. “We’ve got footage that shows the meeting room that was rented out *filled* with about fourteen people, and then everyone collapses, and just melts into thin air. We can’t explain it.”

“Do you have a suspect?”

“This woman standing at the podium... She stays upright until the end. She melts into thin air at the end, too, but… She was staying upright until the end. We think it’s her.”

Ed, sitting on the couch, turned over to face Terry, who was sitting in a recliner with a mug of steaming hot chocolate. “Hey, Terry, do you think it’s the work of SR? It could be their wormholes.”

“I don’t see any evidence of wormholes. This is something else. That woman at the podium… She isn’t right. I don’t think she’s working with SR either.” He shrugged.

Kim spoke, “I can’t say for certain, but doesn’t she look like… Wrong, somehow? Something about the way she looks is wrong, but I can’t tell what it is from that security footage.”

One hour later:

Julianne squinted at the footage. Greg said, softly, “It reminded me of the way that flake of the fused soul melted from the air. Do you think so as well?”

She nodded. “I can’t tell you with certainty *what’s* going on in this footage, or even if the footage hasn’t been tampered with, but I have a suggestion.”

“What might that be?” Greg asked.

She pointed at the woman behind the podium. “Whatever *that* is, it isn’t human. It isn’t even from this dimension, I bet. We need more proof before we go jumping to conclusions, but that’s my hunch.”

Alsyrna slept, waiting for her strength to return. The vine which would strangle humanity coiled in the void between potential universes, a twinkling in her mind took notice of the extracted soul at the earth’s core, and the extracted soul floating high above. The way they had each been pulled out left her with a very convenient way to quickly destroy the civilization humans had built and unified around. In that chaos, their souls, devoid of purpose and belonging, would be *much* easier to harvest. The twinkling softly laughed to itself, and returned to its dormancy. Her people *would* live again.

**Chapter Nineteen**

The Assault

**Part I:** Preparations

Year: 2207 AD

Terry looked over the group. “Are we ready?”

Brianna nodded. “I think so.” She turned around to face the rest of the group. Kim, Phillip, and Ed (restored to his body) were there, as were the two recruits they had gained since then, Jeff and Mary-Anne. “Are you ready?”

Phillip nodded. “Ready.”

Kim looked up at Brianna.. “Ready.”

Ed stared without moving. “Ready.”

Jeff licked his lips. “Ready.”

Mary-Anne stared down at the facility nervously. “Ready.”

Brianna pulled the mask down over her face. The rest of the group followed suit. “Of all of us, Phil makes the most stable wormholes with the largest range, and his mental willpower and stamina will allow us to all use the same wormhole to get into the facility, without him passing out. Kim has shown the most aptitude with wormhole-fighting, so she will be our front-line as we make our way through the facility. Terry knows the general layout of the facility, so he will get us to the general area of the chamber where Lance is being held. Ed has the greatest understanding of wormholes, so he’s the most adept at closing those opened by SR. Jeff and Marry-Anne have the least experience, but are both decent at the use of wormholes. As for myself, I can recognize Lance. As I am currently the only one with the knowledge which SR desires, keeping me out of their hands is necessary. Lance understood this, which is why he is currently in their captivity. The purpose of this mission is twofold.

“Firstly, this must be a proof-of-concept for our ability to effectively counter SR. If we are to have a future, we must prove ourselves to be a force capable of directly opposing SR. Secondly, this must serve as an example for our future. Those who are captured by SR must not be left behind. Lance fought to save my life. He fought to keep the secrets in my mind out of their hands. He must not be forgotten.”

Phillip waved his hands, and a wormhole tore open before them. “Alright, this leads to a janitors’ closet on the fifth basement floor of SR headquarters, five kilometers away. From here, we need to hook up the receiver for Natalie’s surveillance equipment. Once that’s done, we’ll be able to see whatever their security cameras see. This will allow us to stay out of their sight as we move through the facility. The elevation difference through this wormhole is negative three-and-a-half meters; please step very slowly and carefully so you don’t break an ankle.”

Ed went first, one leg at a time. His foot slammed into the floor on the other side. “Ah!” he gasped.

“You alright?” Phil asked.

Ed continued through the hole. “That first step’s a doozy. That definitely *hurt*, but I think I can just walk it off. Be ready, your foot will get yanked forward and then down when you try stepping through the hole. It’ll throw you off-balance if you aren’t ready.”

Mary-Anne and Jeff snickered. Jeff coughed and said “You’re supposed to have been practicing elevation changes, and the other mobility exercises, instead of burying yourself in theoretical research all day.”

“Shut it and get down here.”

One toe at a time, Jeff edged his way across. “If you spread the energy gain out, then you don’t get injured. This is basic, dude.”

Terry cleared his throat, and when he was certain he had the attention of both Jeff and Ed, he warned in a harsh whisper, “Stop squabbling. There’s a very real chance we will either be killed or tortured *without mercy* if we fail here. Be vigilant and don’t make so much noise. We’re in a tiny closet in an isolated branch of the facility, but that doesn’t mean no one can hear us. Who’s next?”

Kim nodded. “That’ll be me.” She inched across. “All is good, next person?”

Mary-Anne slinked across the hole. Her foot slammed into the ground, but more softly than Ed’s had. “Ah. I’ll be fine. Next?”

Terry traversed the hole carefully. The storage closet was starting to get cramped. “Brianna, you go next. Phil, are you holding up alright?”

“Don’t worry. I’m fine, just keep going.” Phil was beginning to sweat.

Brianna reached down, and picked up the bundle of wires hanging out of the wormhole near the ground. A daisy chain of small wormholes snaked through space back to their base, where Natalie sat at the computer, wearing a headset, a command window open with a blinking cursor, her fingertips poised above the keyboard. A bead of sweat rolled down her nose and fell to the floor.

Brianna entered the wormhole with the bundle of wires, and landed in the storage closet alongside the others. “All clear in here. Come on in, Phil.”

Phil nodded, and stepped into the hole, carefully avoiding stepping on the bundle of wires as he did so. He shrunk the hole down after entering until it was just large enough for the wire to feed through.

“So, first priority is to establish our eyes and ears. We only knew about this janitors’ closet because of Terry. Now, we need to figure out where the nearest network terminals are. Once that’s done, we create one final wormhole from this closet to that network terminal. Then, Phil compresses the wormholes together to form one very long wormhole, directly back to base, so that Natalie can reach through and plug everything in.” She pulled a beige, nondescript plastic box out of her backpack, with a blinking red LED on it. “This is our short-range transmitter, to handle our comms. It should cover the facility we are in, once installed. This must be placed next to the network terminal and wired accordingly. Additionally, it is equipped with a small EMP charge to automatically shut the wormhole and subsequently sever the wire connection back to our base, so that SR can’t use it to gain access. This would be detonated by Natalie in the event of our premature discovery.” She tucked the box back into the backpack. “If all goes as planned, we’ll only need this for the comms, and the EMP charge will be unnecessary.”

Jeff scratched his head. “You couldn’t have explained the plan to us *before* we started?”

Kim nodded. “Yeah, this is the first I’m hearing of, like, *any* of this. You guys?”

Ed shrugged. “I think she mentioned something about the EMP charge, but it was in passing, and she put, like, *no* weight or importance on it. I had no idea it was more than a side project. Terry, did she even tell you?”

“Other than the general gist of ‘go in there and fight bad guys’, she didn’t tell me any of the specifics. It’s not a *bad* plan, but we really could have had this discussion back at the base, during dinner last night or something.”

“*Unless…*” Mary-Anne drawled, “She didn’t tell us the plan *on purpose*, in case she thought one of us was a double agent. It’s brilliant. This is why she’s our leader. That *is* why you didn’t tell us the plan, right?” She turned to Brianna.

“*I’m bad at communication, okay*!?” Brianna hissed through her teeth. They could hear the faint sound of Natalie howling with laughter through the chain of wormholes back to the base. “If you guys want to abort the mission, and come back later, we can. Should we do that?”

One by one, they shrugged or shook their heads, except for Phil. Phil spoke, “She told *me* about the plan. I assumed you all knew, since I’m usually the last to hear about things. You didn’t know?”

Silence, until Brianna broke in, “I forgot to tell everyone else the details. Alright? Does this affect our ability to carry out the mission here and now? Are there any more preparations that need to be made before we get started?” She waited a moment. “No?” Head-shaking again. “Good. Let’s begin.”

**Part II:** Infiltration

Kim opened an eye-sized wormhole into the hallway. “Clear from the left.” She swiveled the other end of the wormhole to check the other direction. “Clear from the right. Security cameras are present.” She snapped the eyehole shut. “Can we get cloaking?”

Brianna tapped Ed on the shoulder. “How’d your refinement of the technique go?”

“It isn’t perfect, but it’ll do.” A technique Ed had developed, during his research, was to use multi-layered wormholes to completely bend light around a space, rendering the inside of that space completely, truly invisible, with the caveat that nothing outside of that space can be seen directly from the inside. This is circumvented by the use of eyeholes from the inside to the outside. He slowly spun around, waving his hands through the air with intricate motions, dragging notches and crevices of space around them, wrapping them in layers of empty space. From the outside, the room appeared to smear as the seven of them were wrapped with stretched space. Then, Ed punctured the layers of space, filling the layers with interconnected wormholes until the space around them simply ‘skipped over’ the area they were standing in. Within the dark space, all of them put a hand on each other’s shoulders to keep their balance and prevent bumping into each other.

Kim opened several eye sized wormholes. “Checking this room for a terminal.” The other ends of the wormholes snaked around the room, probing it for the desired terminal. The room contained spare surgical equipment, which looked to have been unused since it was manufactured. “Storage. No terminal.” She checked the next room. A lone technician replaced a burnt-out component in an old extractor tool. “Workshop. No terminal.” She went on to check the next twelve rooms in the hallway. After the many failed searches, she found what they were looking for. “Server room. Plenty of network terminals. No cameras.”

Upon hearing their target had been reached, Phil stepped forward through the group, and opened a wormhole from the inside of their closed space to the server room. “Everyone through.” They filed through the wormhole, which Phil promptly closed. Ed let his cloaking shell dissolve after they had entered the server room.

**Part III:** First Blood

“This is it, right?” Terry gestured at the door. “This is the room they’re keeping the prisoners and dissenters in?”

“That’s right. We breach the door on three. One, two, three!” Brianna began a headlong charge at the door, and as she was about to crash into it, a portal sprang open in her path. They entered the room, and were shocked to find it a generic office room.

**Chapter Twenty**

The Punchline

**Part I:** Devastation

Ed screamed into the headset, “Natalie! Natalie, do you copy? Disconnect the network terminal! The mission is aborted! Repeat, blow the EMP! The mission is aborted!”

“I copy! Stay safe!” The previously clear connection was replaced by oppressive electronic fuzz. The EMP had been blown. Ed reached out with his mind and slammed the wormhole shut, isolating this place from the lab.

Alsyrna’s grip on Brianna’s soul tightened even further, twisting her mind, her memories, and her emotions. Brianna laughed, and floated into the air, her soul (burning red hot) whipping around her faster than the eye could track. “I hope you told your loved ones back home that you love them; that was the last time you’re allowed to do so. It’s time to die, bitches!” The soul accelerated until it became invisible, and the only marker of its presence became the endless waves of heat which were thrown outward from her. “In western cuisine, it’s customary to cook your meat before you carve it up. *Burn to cinders you careless ingrates!*”

Waves of flame rolled outward from Brianna. She was impossible to approach. Ed heard a bloodcurdling scream, whose owner he recognized. “Mary-Anne! Hold on!” He attempted to open a wormhole to her, but the moment it appeared next to her, the soul caught her square in the cheek, blowing her face apart, and spouting streams of boiling blood into the air around her.

“Brianna! You can stop this! You can end this bloodshed right now!” Terry screamed into the fiery maelstrom. “I know how you feel! I know you want revenge! But this isn’t the right way to go about it! You can sti-” The soul crashed into his skull, scattering his brain across the wall next to him.

Brianna glared coldly down at his burning corpse, as her soul continued smashing into the SR workers. “Shut the hell up, old man. You’ve been alive more than long enough.”

Ed turned away. She hadn’t noticed that he was still alive, yet. But now that Brianna had flown off of the deep end, his life was in immediate danger. He wouldn’t be able to rescue anyone. Opening a wormhole would draw her attention, and with how fast her soul was flying through the air, it would be a split second from drawing her attention to an immediate death at the hands of that whirling ball of death.

He reached Phil, who had managed to find cover. “Phil, we gotta get out of here.” Ed whispered. “She’s lost it. She’s going to kill all of us.”

Phil nodded, his face drained of blood. “I know. Believe me, I know we need to leave. But, Ed... I’m sure you’ve figured this out by now, but she can ‘hear’ wormholes being opened. If I open one, it’ll be ‘loud’, so to speak. She’ll attack the second I open anything to anywhere.”

“I have an idea. I can distract her for a few seconds. Use that time to escape. Take Jeff and Kim with you.” He gestured across the room. He could see the top of Jeff’s head poking up from behind cover.

Phil firmly shook his head. “That is suicide, and you know it, Ed. I’m not going to leave you to die. We both know it takes several seconds to build up your cloak. That’s more than enough time for her to nail you.”

Ed took a deep breath, and strode out into the open. “I’m stronger than you think.”

Brianna noticed Ed, and a smile crossed her face. “Ah, Ed. You were my favorite. You learned *so* quickly. Such a brilliant student. Brimming with potential. So *smart* for your age!” She began to shriek with laughter. “I bet you’re awfully tired of everyone older than you feeding you that garbage, huh!? It’s okay to get mad. I encourage it. I told my son that for years. For his entire life. But you know what the truth was?” She stared Ed down. “Go on. *Guess*.”

Ed guessed, fearless before imminent doom. “He was average, wasn’t he?”

“That’s *right*. That’s fucking *right*. In this world, in this new era of immortality, reproduction isn’t necessary any more. It’s a waste of time, and a waste of resources, and pregnancy is fucking *terrible*.” Every second that ticked by, that whizzing soul came ever closer to atomizing Jeff’s skull. Every second that ticked by, it killed more SR workers, who were still scrambling to stay out of its path. The tiniest glimmer of sanity deep within Brianna was horrified at the words spilling out of her mouth, but it was overwhelmed by the frenzied majority of her mind, pulsating in agreement with these words. “I filled that poor kid with so many expectations. I made him push himself so hard, all the time, because I wanted him to be greater than I was. I wanted him to be more than just a meek housewife to some androgynous *painter* who couldn’t even consistently put bread on the table. But how can a kid, every generation, be greater than his parents? Evolution doesn’t work like that. Kids *aren’t automatically better* than their parents. Sometimes they’re worse, and it is for that reason that, in this age, reproduction is no longer necessary. We can simply rework our *own* genetics to become stronger. We can become evolutionarily superior without needing to reproduce.”

Ed stepped forward, shortening the step after a particularly wild glare from Brianna froze him to the spot. “Do you regret the way you treated your son?”

Brianna’s grin froze, her eyes widening, her lips pulled taut over her teeth. But it broke down, her eyebrows sunk, her eyes flooded with tears, her bottom lip began shaking, and the corners of her lips drooped down. The maelstrom ceased. The sunk to the floor, and collapsed into a ball. “I loved him.” She mumbled quietly into the floor. She turned her head to the side, speaking slightly louder. “I loved him so much. I loved my husband and my son, and I loved the life we had. I loved being a simple housewife. Damn me for it, but I loved it.” She rolled over onto her back, and folded her hands over her stomach. “I loved showering my son with my love, and I am so, so, so sorry that it was too much for him to handle sometimes. I should have been more relaxed. I should have let him grow at his own pace. I should have respected his boundaries. I shouldn’t have treated him like a project. I shouldn’t have forced him to aim so high. If he hadn’t gone to college, and he didn’t originally want to go, maybe they’d have been outside of the lethal zone. Maybe we’d all have been able to recover. Maybe… It’s my own fault that they’re gone.”

Ed slumped to the floor. It was over. She was back to her old self. They would be okay. “It’ll be okay, Brianna. It’ll all be okay. It isn’t your fault that they died. You can’t blame yourself.”

Brianna sniffled. “I know. I know I can’t.” She looked up, her eyes wide open, the last of the tears having fallen several moments before. A wild grin spread across her face. “Which is why I blame these cocksuckers” a whirlwind built up in the room “for dabbling with forces they didn’t understand,” the red hot soul rematerialized, “without so much as a spare thought for all the people their little experiments would ultimately kill!” She rose into the air once more, limp, like a puppet hanging from a single string at the hips, her limbs dangling below her, scraping the floor as she rose up into the air.

Ed hastily wrapped himself in layers of space. “That’s no good, Eddie! You’re nowhere near strong enough to face me! You’re only a student!” The soul slipped through a gap in the folds before he could completely seal himself off. However, Ed was just fast enough to trap the soul in a layer of space separate from his own. He could barely sense where the soul was. A tiny hole opened inside of Ed’s sealed-off space. “I invented this! You can’t beat me at it!” The soul whizzed through the hole, and was immediately caught in a short loop of wormholes, which Ed closed into a single ring-like tube of space, isolated entirely from the space within his shelter. The soul must now circle this tube endlessly. But suddenly, he felt the presence of this soul disappear from within that isolated tube of space. By this point, he had completely clad himself in folds of space, and he was effectively invisible. He opened an eyehole on the other side of the folded space, towards where Phil had been hiding, to see if he’d evacuated yet. But the moment he opened that eyehole, he was met with a blast of heat. The entire room had been incinerated. No human being could survive in that conflagration.

Brianna shrieked with laughter. “If you’re looking for Phil, he-”

Ed slammed the eyehole shut. She knew he’d opened it. It would have been only a matter of time before she found it and killed him through it. He didn’t need to hear the end of that sentence. She’d killed them. So, Terry was dead. He saw him die. Mary-Anne was dead, too. Phil was dead, he had to assume. If she’d found him, he was dead. Jeff was clearly visible the entire time, so he was probably dead. That left Kim. He had no idea where she’d gone. Next to himself, she was the most agile user of the wormholes. There was a good chance she was still alive. He had to make contact with her. He would open a wormhole for a split second in different parts of the room. That was his plan. He blinked several times around the room, peeking through the hole. He saw the bodies of everyone but Kim. He was right, she wasn’t dead. Somehow, she had escaped. He opened a large wormhole from inside his folds to an area of the facility far from Brianna.

He reached for the communicator, and wasn’t particularly surprised that it didn’t function anymore. He threw it down in frustration. He didn’t bother trying the unsecured channel, because then Brianna could hear them coordinating and wherever they met up, there she’d be. A door opened nearby. Francis walked out into the hall.

Ed heard the footsteps and turned around. Francis looked him up and down. “You were in that security footage, in that room. Where that woman burned everyone down. But you vanished, somehow. Now, you stand before me.”

“Who are you?”

Francis smoothed his tie, and extended his right hand. “My name is Francis Roberts. I’m the president and CEO of Soul Retrieve. I want to make this clear right off the bat. I’m not angry. Not at you, anyway. From the footage, you seemed not to be doing harm to anyone. So, I would like to make you a deal. If you escort myself and several of the higher-ups of this company outside of the facility, we will be in your debt. This is no small favor, to us. We would be truly grateful. We have power, you know. Anything you want, in this world, we can make happen.”

“Is the name Terry Gallo familiar to you?”

Francis nodded. “Yes. I know him. He retired thirty years ago. One of the higher-ups in this room is his cousin, Julianne.”

“He was just recently killed. Terry was brutally, gruesomely killed, right before my eyes. His brain was splattered against a wall. Does Julianne know?”

Francis nodded, gravely. “She knows.”

**Part II:** The Long Walk Home

Electricity arced through the air, the air thick with electromagnetism. All dead, all disappeared, all was lost. There was nothing left to do here. There was no one to save. There was no one to fight. The only thing Ed had left to do was to return home. He attempted to open a wormhole, as his legs were tired and he didn’t want to walk all the way, but the space here felt slippery. It was as though it had been greased with fat and oil, and he could not get a grip on it to stretch any of it into a tunnel. Attempting to open a wormhole here only made him feel tired.

All of them died, everybody. There was nothing left here. There was no one to blame for what had happened. There was no one to blame but *her*. Their screams as they were flung into the next universe would haunt Ed’s dreams for weeks, if he even managed to escape this hellhole.

He felt a surge of anger upon seeing a young woman’s face badly burned, with her body sliced into strips like sashimi by the rampaging folds of space. They shouldn’t have come here. They shouldn’t have tried to rescue “Lance”. They shouldn’t have learned anything about space, or souls. These people, whose bodies were reduced to nothing but ground meat and bone shards, hadn’t done anything wrong. Even Francis, who was supposedly behind everything, was innocent of direct wrongdoing. Yes, according to Terry, he was quite ruthless. But he never genuinely wanted to harm people, and he genuinely believed his technological advances would allow humanity to have a better future. It was all ash and cinders now.

At least Natalie was still alive, he hoped. She was far enough away. He had personally shut the wormhole to her, minutes before anything went wrong. This was a localized anomaly, and that was *all* it was.