

Ntth

**Degree of
Reality**

by John Scott G

Nth Degree of Reality

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gnud

GOLOSIO NONTRADITIONAL
UNIVERSAL DISSEMINATION

“You’re gonna need a bigger boat.”

—*Albert Einstein*

(Quotation unconfirmed.)

Stars

Omens

Cyphers



— 1 —

THE EVENING SKY WAS DEEP BLUE when the meteor shower began painting the heavens with streaks of white fire. Billy and Donna watched in awe as the arcs of pulsating cosmic shards streaked through the vastness of the still-darkening northern sky.

Sitting on their parents' back porch, the two teens scrunched down in the lacquered cedar chairs their dad had handcrafted many years before, tilting their heads back to take in nature's spectacular and eerily silent light show.

"I don't know how you feel about this," Donna said quietly, "but it seems like a real 'yowza' moment." She used one of the terms favored by their late father whenever he was happily expounding a mathematical theory.

"This is 'yowza' alright," Billy replied in the same low tone. "Dad would have loved it."

They both started to speak at the same time.

"And then he—"

"Followed by—"

They stopped and laughed.

“You go,” she said.

“No, you.”

“Okay. I was going to say that he would say ‘yowza’ and then follow that with a full scientific explanation.”

“Oh yeah,” Billy said. “Complete with diagrams if you wanted ‘em.”

“If you wanted them or not,” Donna said.

“True,” Billy admitted with a smile.

Contentedly, they watched the comets dance upon the sky.

With a pleasant “mrrrrumph,” one of the housecats leapt onto Donna’s thighs.

“Hello, furry beast,” she said.

“Which one is that?” Billy asked.

“It’s Kepler.” She lovingly skritchd the cat behind his ears and under his chin. Her reward was a lapful of purring feline.

“Kepler is noisy tonight,” Billy noted.

“I think he’s always this loud. We’re not always this quiet.”

They watched the faraway flashing accompanied by the sound of rumbling from Kepler and the thrumming of crickets in the fields nearby. After a few more moments of

marveling at nature's cosmic phantasmagoria, Donna brought up a topic that had been under discussion for weeks.

“So, are you still trying to come up with a Science Fair project?”

“Yeah,” Billy replied. “It's all been done before. I don't want to do the same old thing.”

“You don't think the world is excitedly awaiting another papier-mâché volcano?”

“The boring people,” he said scornfully.

“Not even if it includes a baking soda lava eruption?”

“Stop it.”

“Okay, how about a diorama? Those are always exciting.”

“Eat old tennis shoes,” Billy said.

“Well,” she replied with mock umbrage, “I was only trying to be helpful.”

“You're very trying,” he told her in an even tone.

“Eat cat hairballs,” she replied.

“Look,” he said after a pause. “Help me go through dad's notes again. You always like doing that. Maybe it'll spark some idea.”

“Sure,” she said.

“You did it again last night, right?”

“Yup,” she said. “I found a couple of pages that make sense if you middle mirror them.”

“What does ‘middle mirror them’ mean?”

“You take a hand mirror and put one edge down the center of the page. The letters or drawings can be read that way.”

“Cool! Let me see that.”

“Okay. After the sky show is over?”

“Deal.”

For the next five minutes, they watched the asteroids perform their fiery aerial ballet, gradually diminishing into twinkling starlight.

“That was nice,” Donna said quietly.

“Thank you, Momma Nature,” Billy said with a hint of mockery.

Donna regarded him quizzically. “Brother dear, are you being ironic or just a wiseass?”

With a sheepish grin, he admitted his dual aims. “I was hoping for both.”

“Mission accomplished.”

“Hey,” he protested, “I’m just going through my early teen angst phase.”

“Hey,” she protested back. “I’m older, so I get to go through a teen angst phase before you do.”

“No, I think it’s first come, first served.”

“No way,” Donna said.

“I tap,” Billy said.

“I object.”

“Overruled.”

“Exception.”

“Noted.”

“Okay,” she told him, “But I am going to out-angst you.”

“We’ll see.”

“Yes, we will,” she said with a satisfied tone of voice.

“Are you ready,” Billy asked, “to show me what’s with this middle mirror thing?”

“First, I’m going to feed Kepler and Newton. After that, I’ll meet you in dad’s workroom, alright?”

“You got it.”

— 2 —

IT HAD BEEN SEVERAL months since the two teen siblings first discovered the collection of their dad’s notebooks hidden behind a partition in the large oak workbench next to his drawing table.

“Do you think he was hiding this stuff?” Billy asked at the time.

“He was definitely hiding it,” Donna replied, “but not from us. Remember what he wrote to you and me in the trust documents?”

“Something about secret cats...”

“Secrets await where the cats were hiding during your binary lessons.”

“Oh, right,” Bobby exclaimed. “Dad was teaching us binary coding and then we heard rustling under the desk.”

“Yup. The furry critters enjoy napping here. Dad called it a cache of cats.”

Each time they went through their dad’s papers was an emotional rollercoaster ride. Still wounded by the loss of their father from cancer just twelve months ago, they both were often near tears. Despite their mourning, they

couldn't help but smile at every witticism, every wry drawing, and every pun that their father had scrawled on the thick, off-white, and textured pages.

"It's like dad is still talking to us," Donna said.

"And still making jokes," Billy replied.

They paused, both smiling, yet also on the edge of crying.

"Careful," Donna said. "We don't want to smudge anything he wrote."

"I'm okay," Billy said, followed by a sniff.

"So am I," Donna assured him, followed by a sniff.

Reverently, they paged through the first of the five leatherbound volumes, relishing the observations, questions, ideas, theorems, and speculations their father had noted during a lifetime devoted to science and mathematics.

Several nights a month, they would "look the books," as they called it. They invited their mother to join them, but she always declined.

"Maybe I can someday," their mother responded. "Not yet."

"Mom, are you sure?"

“Yes. You two keep reading them. It’s fine. Really. He always said he was making notes for both of you.”

“We know, but if you—”

“I’m just happy that you’ve discovered his messages,” she said.

“Sure, but—”

“Look, I’ll read them someday. But for now, I’ve got other memories to deal with.”

No amount of coaxing got her to change her mind, so the two teens researched their dad’s writings on their own.

On this evening, they stood by the workbench, paused for a moment, glanced into each other’s eyes, took several deep breaths, and exhaled dramatically.

“Ready?”

“Ready.”

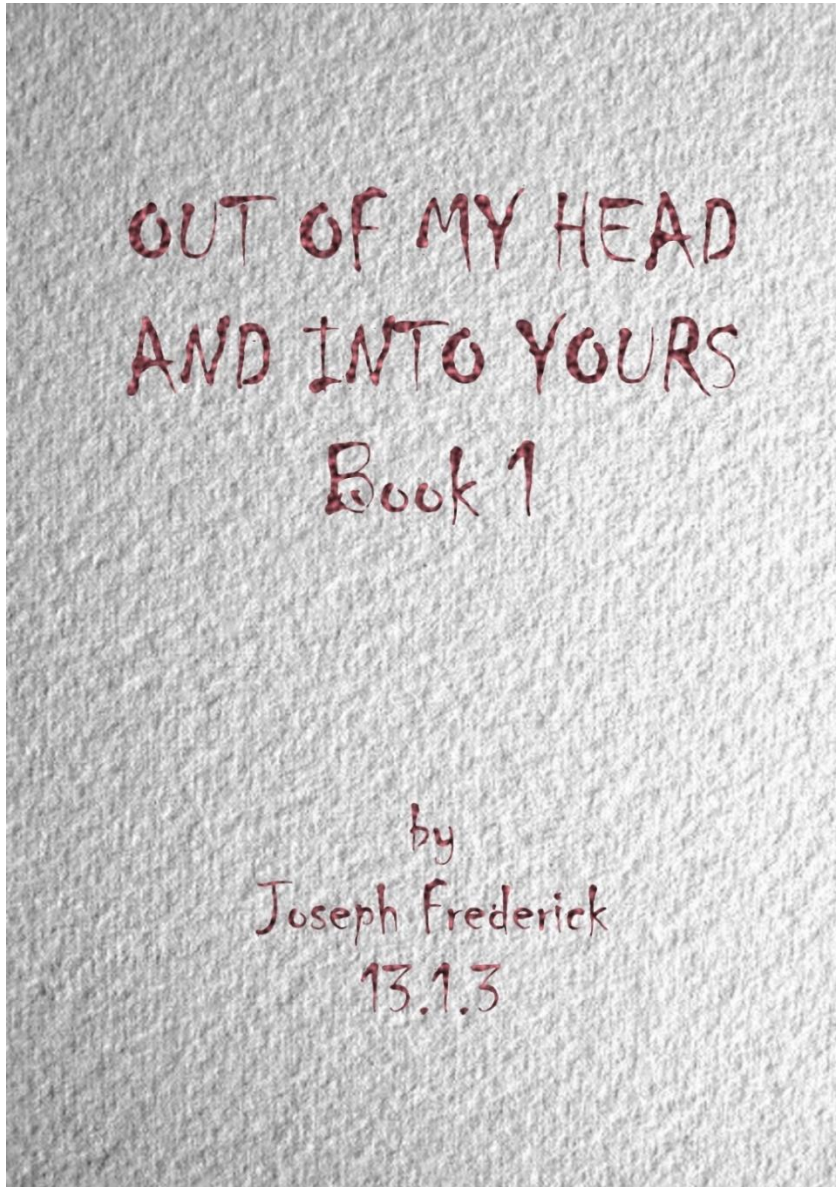
They got out the large books.

Billy said quietly, “Okay, sister of mine, show me the middle mirror.”

Without a word, Donna opened the first notebook to the title page. In their father’s beginning-level calligraphy they read, “Out of my Head and Into Yours, Book 1.” Below that was their father’s name, “Joseph Frederick.”

His name was followed by mysterious digits,
“13.1.3.”

“What *are* those numbers?” Billy asked.



“Remember when we came to page 13?”
Donna asked him. She opened the notebook to
page 13 and tapped her index finger on the

third line of the first paragraph. It read, “100r23l31 renroc WN roof tesolc ned || the numbers of pi are leading to god.”

Billy leaned over to read the line. He glanced up at his sister with a puzzled look on his face. She smiled, removed a hand mirror from the desk drawer, and held it in the middle of the sentence at the two vertical lines. The reflective surface of the looking glass faced the start of the text. In the mirror, Billy saw, “den closet floor NW corner l3l32r00l.”

“Okay, I give up,” Billy said. “Tell me what’s on the northwest corner floor of the den closet.”

“Under the carpet is a safe.”

“Locked or unlocked?”

“Locked.”

“So, how do we—”

“The combination is right there,” Donna said. “Thirteen left, 32 right, double-zero left.”

“Did you open it?”

“Wouldn’t you?”

“Yeah, but I would have called you first.”

“I did call you. You didn’t pick up. You ignored me, so I left you a raspberry as a message. Remember?”

“I remember thinking you were getting your phone all wet.”

“My call was pretty late last night. Where were you? On a hot date?”

“No, uh,” Billy stammered, “I was busy.”

“Who was she?”

“No one you know. C’mon, what was in the safe?”

“Take a look,” Donna said. She handed him a 9x12-inch manila envelope with his name on it in the same calligraphy as on the notebooks.

“This is sealed,” he noted.

“Yeah. Mine was, too.”

“Did you open yours?”

“You bet,” she said.

“What was in it?”

“Dating advice and a list of universities where dad had given speeches or made some contribution to their research projects.”

“Yeah, that sounds like him.”

“If you want to open yours in private, I’ll leave.”

“No,” Billy said. “That’s cool.” His hands shook as he unsealed the bulky envelope and pulled out a sheaf of papers. He glanced at the

first page, flipped to the second, his eyes widening. “Holy shit.”

“What?”

“You’re not going to believe this.” He passed the pages to his sister, and both avidly read from the papers, chills running across their skin and down their spines.

“If this is real, we’re looking at the future,” Donna said.

“It looks like dad went beyond high-tech,” he replied. “We have to try this!”

“Looks like it could cost a lot,” she said.

“Yeah,” he admitted, “but I’ll bet we can do a preliminary test pretty cheaply. If that works, we’ll have to raise some funding in order to continue. But let’s try it with the equipment we have.”

“We’ve probably got enough computing power for a brief test,” Donna noted, “but we’ll need a much higher-definition display. The screens in this house are good, but not anywhere near what this requires.”

“Yeah, we’ll have to borrow one of the maximal screens from the science lab,” Billy said.

“Borrow?”

“Well,” Billy said, “let’s say scrounge.”

“No, let’s say steal.”

“Scavenge.”

“Steal,” Donna told him firmly.

“You sound like a guidance counselor.”

“That’s offensive,” she said with mock outrage. “I would never accuse you of something so annoying.”

“Look,” Billy said, “it’s not stealing if we give it back afterwards.”

“And are we going to give it back afterwards?”

“Of course,” Billy replied.

“Really?”

“Uh, sure,” Billy replied.

“Billy...” Donna said, mimicking the way their mom sometimes talked to them.

“We’ll definitely think about giving it back,” Billy said.

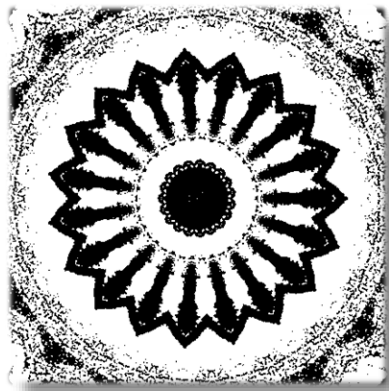
“Brother dear, you’re impossible.”

“Thank you. I try my best.”

Pixels

Patterns

Projections



— 3 —

THE NEWSPAPER PHOTO was of a second-rate children's theater production. Like kid's shows in general, it radiated ersatz good cheer. The photo was of no consequence, but it was the way the photo appeared on the page that mattered.

Donna and Billy sent the photo and all the other data to one of their father's former lab assistants, Dwayne Jaye, now a NASA consultant. Despite the age difference, the two teens got along well with Dwayne. After giving him a day to review the material, they contacted Dwayne via a video call.

"Hey Billy! Hi, Donna," Dwayne said. "Give me a minute to get to you."

On their screens, they watched Dwayne dangling from a braided rope in his basement full of data processing gear.

"You always seem to be hanging around," Billy noted.

"Just finishing my exercises," Dwayne replied. He twisted his shoulders and launched himself from one rope to another and then

dropped into an ergonomic chair near the viewing camera.

“How’s the muscle toning coming?” Donna asked.

“Getting there,” Dwayne replied. “Been working on it for seventeen years now,” he said, referring to the auto accident that had crippled him when he was in college.

“We can call back, if this isn’t a good time.”

“No, this is great. Just let me fasten my seat belt.” He made some adjustments to the chair and then smiled at them through the computer screen. “Okay,” Dwayne said. “I’ve been looking over the material you sent, and it’s fascinating. As for the photographs of the kid’s show, I’ve got three words for you.”

“What are they?” Donna asked.

“Ben Day Dots,” Dwayne said.

“What?” Billy asked.

“They’re like pixels, only very ‘old school,’” Dwayne explained. “The thousands of little blips that make up a lot of printed photographs are called Ben Day Dots. A guy named Benjamin Day came up with the process in the 1800s.”

“Yeah, that’s in dad’s notes,” Donna said.

“Your father,” Dwayne noted, “was a stickler for leaving a paper trail.”

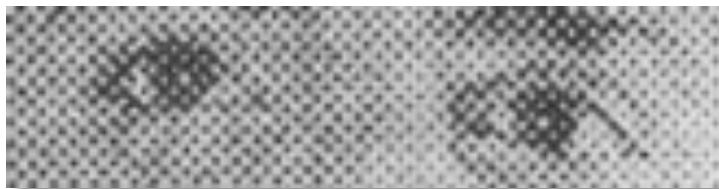
For a moment, they studied three images in Joseph Frederick’s documentation.



Original size.



Enlarged 1.



Enlarged 2.

“Yeah, okay,” Billy said. “Dots cool,” he punned. Donna and Dwayne groaned.

“That’s at least one demerit for you,” Donna said dismissively.

“Okay, you’re right,” Billy responded.

“Here’s what I think,” Donna said. “It’s great how the brain connects the whites, blacks, and grays to form an image from the tiny ink stains.”

“Based on what some of these documents indicate,” Dwayne said, “your dad took this principle and expanded on it in a big way. He wrote a program that increased the detail and definition of every part of the image.”

“Dwayne, how would you describe what’s going on here?”

“What your father’s program does is take data from the pixels and extrapolates possible movement of the subject of the image, essentially turning a still photo into motion graphics. It’s very cool and I’m feeling very stupid for not thinking of it myself.”

“Plus,” Donna said, “the program adds more weight to every position of the pixels, allowing for a higher resolution playback, even in slow motion.”

“Don’t forget the depth of each pixel,” Dwayne pointed out.

“What do you mean?” Billy asked.

“Your dad was also concerned with the amount of data inside each pixel.”

“Oh, right!” Donna exclaimed. “It’s like each pixel is made up of billions of regular pixels.”

“Quintillions,” Dwayne said.

“You’re kidding.”

“Nope.”

“Wow.”

“Your dad’s program also did something else.”

“What’s that?”

“It increased the refresh rate.”

“You mean, in addition to making the raster so much more detailed...”

“...every section of every image appears on screen faster than before. He called it DGI, or Definitive Graphical Interface.”

“This is T-A!” Billy exclaimed.

“Teeay?”

“Totally awesome.”

“It’s splendid,” Donna agreed, “but even if we get a higher-resolution display, we don’t

have the computing power we're going to need to make use of this. How can we move forward?" Donna asked.

"Hey," Billy said. "What's this here?" He pointed to another notebook page with cryptic writing. "Quick, hand me the mirror."

"You're welcome," Donna said as she placed the mirror in his hand.

"Yeah, yeah, please and thank you," he said.

They read the backwards writing and then followed their father's clues to the location of a hidden link on their dad's web site. Clicking it led them to a selection of high-resolution video files.

"What's going on over there?" Dwayne asked.

"These are test videos dad made, I guess using the university's supercomputer," Donna said.

"Excellent," Dwayne said. "Can you plug me in so I can see it, too?"

"Sure thing," Billy said eagerly. After making the connection, they all watched the videos, first with curiosity, then with growing excitement. The brief clips were of mundane

subjects—a cat leaping onto a counter, kids on skateboards, a plane performing barrel rolls through billowing clouds across a cobalt blue sky—but each video clip had a depth and sheen that was astonishing.

“That’s amazing!” Donna exclaimed. “It looks so real. It feels like you could put your hand inside of the images.”

“And we’re looking at it with current screen resolution,” Billy pointed out. “To really experience this properly, you’d need some ultra extreme definition screen. We have an 8K here in the house and when we got it, it was considered ‘state of the art’ but it’s ancient compared to what’s required for this.”

“Your dad was beyond state of the art,” Dwayne said. “He was ahead of the art.”

“Does anybody even make an extreme screen like what we need?” Donna asked.

“Not commercially,” Billy replied.

“What does that mean?”

“The military has them.”

“The military?”

“The Pentagon.”

Donna and Billy turned to the video image of Dwayne.

“Dwayne, you sometimes do work for the Pentagon, right?” Billy asked.

“Well, look, that’s, um,” Dwayne replied. “That’s, uh, not something I can...”

“C’mon, Dwayne,” Billy said.

“I’m sympathetic to your endeavors, but, well...”

“C’mon, Dwayne,” Donna said.

“You have to understand. There are matters of confidentiality...”

“C’mon, Dwayne,” Billy and Donna said.

Dwayne sighed. “Okay, I have done some consulting for the DOD, but—”

“Fine,” Donna said. “We just need the equipment to run some of dad’s experiments.”

“I can get you the display,” Dwayne said.

“Alright!” Billy said.

“But that’s not your main concern,” Dwayne informed them. “You can’t run this program off a laptop, or a desktop, or even a mainframe. It will take a monumental amount of computing power.”

“No shit,” Donna said.

Dwayne stared at her from the screen. “Donna!?”

“Hey,” she said. “I sometimes swear.”

“Apparently.”

“For heaven’s sake, get a grip,” Donna said. “I only swear when it’s absolutely fucking necessary.”

“I would appreciate it if you would try to avoid that type of language, young lady.”

Their mother was standing in the doorway to the workroom.

“Sorry, mom,” Donna said. “It’s only sometimes.”

“I understand, dear, but try to exercise a little more control.”

“I will.”

“Hi, Mrs. F,” Dwayne said.

“Hello, Dwayne. You’re corrupting my children again, I see.” She moved into the room slowly, using the cane she still needed after hip replacement surgery a few weeks earlier. She stood by Donna and Billy in front of the video screens. “Dwayne, you may call me Emily, you know that.”

“I know, Mrs. F,” Dwayne replied.

“So,” Emily said, sitting in a chair that Billy slid into place for her. “Dwayne, what have you gotten my impressionable kids into here?”

“It’s something your husband developed, Mrs. F. And I think it’s possibly something vitally important.”

“Don’t we all have big enough TV screens already?” she inquired.

This was met with embarrassed silence from Donna, Billy, and Dwayne.

“What?” she asked. “What did I say?”

“Mrs. Frederick, we’re not talking about the size of the screen or even the quality of the image.”

“No? What is it all about, then?”

“It appears to be about envisaging possible outcomes of events suggested by the current video evidence,” Dwayne said.

“Oh, come on now,” Emily scoffed. “That sounds like predicting the future.”

Donna, Billy, and Dwayne were silent.

“That’s impossible,” Emily said. She glanced from her children to Dwayne’s image on the screen. “Right?”

“Welllllll,” Billy said.

“Maybe not, mom,” Donna said.

“According to your husband’s notes,” Dwayne said, “that just might be a theoretical possibility.”

Emily took a deep breath, exhaled, and asked, “And you three are planning on looking into all this?”

“Oh yeah,” Billy said.

“Yes, mom,” Donna said.

“I’m afraid we don’t have any choice but to do so, Mrs. F,” Dwayne said.

“How so?”

“There are scientific implications to the data in your husband’s notes. Besides, he would want this to be investigated.”

“And who better than us?” Donna asked.

“That’s right,” Billy added.

“You know we’re right,” Donna said.

Emily muttered, “I know I shouldn’t have had children.” She struggled to her feet.

“Oh, thanks, mom,” Donna protested.

“No, seriously,” Emily said as she headed toward the door. “Somehow, with you two, shit is always just about to hit the fan.”

“Mom!” Donna said.

“And then it does hit the fan, and you two don’t do enough of the job of cleaning it all up. It’s a goddam annoyance.”

“Mom, can you not say things like that, please?”

“Honey,” her mother replied, “I only swear when it’s absolutely fucking necessary.” Emily was still shaking her head as she exited the room.

The two teens looked at each other, shrugged, and then turned to Dwayne.

“We’re all going to have to deal with this in a responsible manner,” Dwayne told them.

“Hell yeah,” Donna replied.

“Fuckin’-A,” Billy said.

“Hey, language!” Dwayne complained.

“We’re just following our mom’s example,” Donna said primly.

— 4 —

“COMPUTING POWER IS USUALLY measured by the speed of processing, and by the velocity of the machine’s internal clock,” Dwayne told Donna on their latest online call. “Sure, some people use the term ‘computing power’ to refer to the amount of storage that is accessible to the CPU, the central processing unit, but it’s always possible to add more storage. It’s the CPU that handles millions of instructions per second...”

“MIPS,” Donna said quietly.

“...or MIPS,” Dwayne continued without pause. “But today, we’ve gone way past millions of instructions per second. Even consumer devices exceed that speed, and military facilities are up to billions of instructions per second, and those of us in Intelligence have at least... Well, that’s classified, but it’s more than billions.”

“Dwayne, we don’t—” Donna said.

“There’s TIPS. That’s ‘t’ for ‘tera,’ or a trillion instructions per second. Next there’s teraFLOPS, which stands for...”

“Tera floating point ops per second,” Donna muttered to herself.

“...tera FLoating point OPerations per Second,” he explained by emphasizing the appropriate syllables.

“Dwayne, you’re not lecturing a class.”

“As for the clock speed,” Dwayne droned on, “that’s where your computer receives waves of digital pulses from a quartz crystal.”

“Dwayne?” Donna said.

“Now,” Dwayne went on, “in discussing processing capabilities, we must—”

“Earth to Dwayne! Earth to Dwayne! It is vital that we clear this channel for breaking news!”

“...consider the scale of... wait, what?”

“Dwayne, we know all that stuff,” Donna said. “We don’t need to consider the number of terabytes on the head of a pin or whatever. What we need is access to an old Cray or one of the new supercomputers.”

“Oh, yeah, that’s true,” Dwayne said. “I mean, that’s a ton of computational oomph you’re talking about there.”

“Definitely,” she said. “So, you need to get us access to that kind of power.”

“Can’t do it.”

“All you need to do is—”

“Nope, nope, and nope.”

“Dwayne, it’s not—”

“No way.”

“Dwayne, will you listen?”

“Look, Donna, there is no way I’m giving you little monsters the keys to the candy store on this project.”

“We’re not asking you to.”

“You should know better than to even think of letting your brother anywhere near that kind of computing power.”

“I agree,” Donna said.

“It wouldn’t be a responsible thing to— wait, what did you say?”

“We want you to run it,” she told him. “You can be in charge of how and when we use the U-X.”

There was a pause. Then Dwayne spoke in an entirely different tone. Deeper. Slower. With each syllable carefully delineated. “And just what do you know about the U-X?”

“The supercomputer of supercomputers,” Donna said. “The one. The big one. Some call it ‘the DP deity’ because of its immense

computational capabilities. It's supposed to be powered by converting hydrogen atoms into controlled fusion," Donna said.

"Where did you get that?" Dwayne asked.

"It's in dad's notes."

"It shouldn't be. That information is confidential."

"Yeah, it was encoded, but that doesn't ever seem to stop Billy."

"Jesus," Dwayne muttered.

"So, will you help us on this, please?"

There was another pause. Then Dwayne said, "This is a highly classified and very sensitive area of national intelligence. I'll have someone from the NSA contact you. Thank you for bringing this to our attention." He tapped his screen to exit the call.

"Don't hang up on—" Donna pounded her fist on the worktable. "Dwayne!" Donna stared at the now empty rectangle on her computer display. "God fucking damn it!" she spat out. Then she glanced around guiltily, hoping her mother hadn't heard her profanity.

Billy came into the workroom grinning. He put a finger to his lips while holding out his mobile so Donna could view the image.

She looked a question at her brother and then tilted her head towards the phone. Filling the screen was a hastily scrawled note in Dwayne's handwriting: "Use JF's MIL-SPEC mobile."

Donna looked up at her brother. "We need dad's secure phone."

"Yeah," Billy said.

"It's around here somewhere."

The two teens began searching through the workroom drawers, shelves, cubbyholes, and metal containers.

"Got it!" Donna said, pulling out a small box from inside the worktable.

"We should have guessed dad would put it in the cat cave."

"Right," she said, punching the power button on the device. Both teens stared at the mobile in frustration. "Damn it. There's no juice."

They plugged the device into one of the computers and then just sat there glaring at the recalcitrant phone. After a few seconds, Donna said, "This is stupid. It'll take a while to charge enough to power it up. In the meantime, help me find dad's security folders that have the

encryption protocols we're going to need for this. It was on a flash drive, I think.”

Again, the two teens searched the room, and this time, it was Billy who was successful.

“Is this it?” Billy asked, holding up a thumb drive labeled *No Personal Use*.

“Let's see that,” she said. She plugged it into one of the other desktops. The computer screen flashed and then a log-in menu appeared. “Okay, here goes...” She typed in their father's favorite nickname and that was accepted as a username by the device. She typed in a password and watched as the screen told her it wasn't a match. She entered another possible password. Still no.

“Try our names,” Billy suggested.

“Right,” she said, and typed. She made a buzzing sound and then said, “Nope.”

“Try the cats' names.”

“Okay,” she said. She typed a few variations but was always denied access. “Wait,” Donna said. “We didn't have Kepler and Newton when dad was alive.” She typed the names of former pets. “We're in!” she exclaimed. They quickly read the list of instructions that filled the computer screen.

“You did it!” Billy exclaimed.

“We did it. Put one up.” They did their version of a “Covid high five,” their hands deliberately missing each other. Donna turned back to the computer keyboard. “Alright, this will let us interact with Dwayne without anyone listening in on us.”

In the days that followed, Donna, Billy, and Dwayne used some of the intelligence community’s most advanced communication technology to outline their next steps and obtain the immense computational power that was needed for their experiment. In secret, they utilized the U-X, which stood for the Ultimate Evolving Computational System, which was the most powerful data processing device in the world.

“Don’t breathe a word of this to anyone,” Dwayne warned. “Each step in our use of the U-X is a breach of national security.”

The two teens looked at each other for a second. They both shrugged and then turned back to the screen.

“We’ve decided that we’re okay with that,” Donna said.

“Yeah, it’s cool,” Billy added.

“No, it’s not cool,” Dwayne said.

“It might not be cool for you,” Billy said, “but we’re fine.”

“It’s not fine!”

“What’s your problem?”

“This could get me arrested,” Dwayne told them.

“We’ll miss you,” Billy muttered.

“It could get you arrested too, come to think of it,” Dwayne added. “If that happens, by the way, go for the juvie level offences. You don’t want to be tried as an adult.”

“Yeah, thanks for the tip,” Donna told him. “The next step is getting the display, Dwayne.”

“I know, I know! I’m working on it. God, you two are as bad as your father was.”

“Thank you.”

— 5 —

AFTER DWAYNE GOT THEM the military-grade display, it took more than 48 hours to install it in the workroom. Part of each day involved shooing Kepler and Newton out of the way while the cables were being snaked between the computers, routers, and the peripheral equipment.

“This place is starting to look like the test lab where dad did most of his experiments,” Donna said.

“No way,” Billy replied. “Even with all the cat hair, this place is way cleaner than the lab ever was.”

“That’s true,” Donna said with a laugh.

“That is so not true,” Dwayne said from his rectangle on one of the laptops perched precariously near the edge of the worktable.

“Hey!” Billy shouted and pointed at his large and glowing screen. “It works!”

“Great,” Dwayne said. “Can you loop me in so we can all watch it at the same time?”

“Sure thing,” Donna said. “Billy?”

“On it,” he said, already typing.

Within moments, they all stared in fascination as one of Josef Frederick's test sequences began playing in silence.

"Color's way off."

"Yeah, we can adjust that."

"Okay then, tweak it."

"Oh, I'll tweak it," Billy said with glee.

Billy tapped furiously on the keyboard, gradually bringing the image into the range of normal hue and tone.

"That's closer," Donna said.

"Hang on," Billy said. "Almost got it."

"There!" they all said at once.

The video was of rose bushes on a verdant hillside, with all the branches, buds, and blooms being buffeted by gusty breezes. Slowly, the camera moved in on one of the bushes. It moved closer, eventually framing a single flower.

"Look at the detail of that image," Donna said.

"Impressive," Dwayne said.

With smooth precision, the camera moved still closer to the bloom. It glided forward past the edge of the petals, past the waving stamen, past the pistil, and finally coming to rest with

the ovule filling the screen with its glowing splendor.

“That’s gorgeous!”

“Look at the color!”

“It’s so beauti—wait, what’s happening?”

The ethereal colors drained away, leaving only a dried husk, which then crumbled and dissolved into nothingness. The screen was now full of dead branches, scattered leaves, and dirt.

“What the hell?” Donna asked.

“Where did it go?” Billy asked.

“The flower died,” Dwayne told them.

“But it was so fast.”

“It’s the algorithm,” Dwayne said. “It’s showing us the fate of the flower without waiting for death to actually occur.”

“How can it do that?” Donna asked.

“Your father programmed it to extrapolate from all available data. Death is the result for every living thing.”

“What if we aim a camera at us?” Billy asked. “Will we see what’s going to happen to us?”

“It will show potential results,” Dwayne replied. “It will just show possibilities.”

“Well, that’s still scary,” Donna said.

Kepler and Newton leaped up onto the worktable.

“Hey, furry critters,” Donna said to the cats. “Don’t let the camera see you guys.”

“Yeah,” Billy added. “I don’t want a video of croaking cats.”

The two cats sniffed the computer gear, sat down, and began grooming. Donna reached out to pet the felines. Almost immediately, the sound of purring filled the room.

“Wow,” Dwayne said. “Noisy cats.”

Billy took advantage of the distraction to type instructions into the computer. One of the high-definition video cameras swiveled until Billy appeared in the center of the frame.

After a few seconds, Donna noticed her brother’s image on the screen.

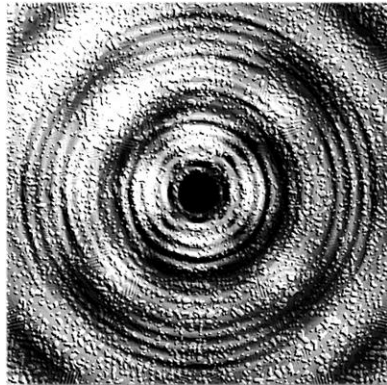
“Billy? What are you—”

But the image went blank. Donna turned to the chair where Billy had been seated. The chair was now empty.

“Billy? Billy?!”

Billy was no longer in the house.

Global Universal Spectral



— 6 —

BILLY'S DISAPPEARANCE HAD Donna frantic and Emily nearly apoplectic. They searched the house and shouted Billy's name loudly enough that the cats hid from them. After going from room to room several times, Emily was amazed to find Billy asleep in his bed.

"Billy, darling?" Emily said softly with a mixture of hope and trepidation.

Billy's eyelids fluttered and opened. "Hmm?" he said, trying to focus his eyes.

"You're here!" she exclaimed. "Donna!" she shouted over her shoulder. "Bedroom!"

"Hi, mom," Billy said with a smile. "Wow, that was amazing! Hey, sis," he said as Donna rushed into the room.

"You're alright!" Donna said. "How long have you been lying here?"

"Dunno," Billy said. "But I was traveling somewhere fantastic! Hey, is there anything to eat? I'm starved."

"Something isn't right," Emily said in a low voice. "I checked his bed every time I walked past this room."

“Me, too,” Donna said. “He wasn’t in this bed just five minutes ago. What is going on?”

“You guys work this out,” Billy told them. “I’m going to get some breakfast.” He slid out of bed and headed for the door. He was wearing a denim outfit that was form-fitting and had no discernable buttons, clasps, snaps, zippers, or Velcro strips.

“Where did you get those clothes?”

“Dad gave them to me,” he said. “If we’re gonna talk, meet me in the kitchen.” He bounded away from them down the hall.

“What the hell?” Donna said. She started to follow her brother.

“Donna!” her mother whispered to her.

“What?”

“Did he try using something? Is it drugs? Are you guys okay?”

“Mom, we’re fine. C’mon, we have to talk to Billy.”

Billy was busy making scrambled eggs by the time they reached the kitchen. He happily regaled them with fantastic tales of taking giant steps across chasm spectrum arcs.

“Chasm spectrum what?” Emily asked.

“You mean rainbows?” Donna asked.

“Yeah, it’s wick symbolic,” Billy replied.
“From the opera guy... Wagner, I think.”

“What is ‘wick’?” Emily asked.

“Wicked. C’mon, mom.”

“Could you at least use all the syllables in the words you speak?”

“Why, certainly, mother,” Billy replied, carefully enunciating each word. “Anyway, the best part is that dad was there, and he gave me these clothes. Neat, huh?! Really comfortable.”

“How do you get in and out of them?” Donna asked.

“You just wave them off,” Billy said. He shrugged off his shirt for a few seconds, then twisted his torso and the shirt was back on. “Isn’t that cool? Anyway, dad was showing me the next realm and it was great!”

“What in heaven’s name are you talking about?” Emily asked, her voice tight.

“Mom, I can’t tell you how awesome it is that Dad’s alive!

“Billy, don’t—”

“He’s just on another plane of existence.”

“This is absurd!”

“No, mom, it’s great! Look, it’s hard to explain, but he can’t come back here because

of all his duties out there, you know, informing the new arrivals, guiding people toward better understanding and acceptance. Stuff he's really good at."

"Billy, do you know what you're saying?" Donna asked.

"If you come with me, you'll see. It's going to be outstanding! Donna, you'll love the way everything looks."

Donna and Emily kept exchanging worried glances as Billy continued relating jaw-dropping aspects of his adventures. He only paused to tap on his phone to send information to Dwayne.

Eventually, Emily had enough. She sighed, stood up, moved to her son, and gave him a hug. "You sure you're alright?"

"I'm fine, mom!" Billy insisted.

"Okay," Emily said. "If you're positive about that, I'm going to go have an aspirin and a lie-down."

"Feel better, mom!" Billy called after her. He turned back to his plate. "These eggs are good," he told his sister. "Sure you don't want some?"

"Positive," Donna said.

“Your loss, sis.”

“Billy, tell me more about the realms.”

Billy smiled as he finished munching. “You know,” he said, “you’re going to have to see it all for yourself.”

“How?”

“Same way I did. Activate dad’s program, step in front of the cameras, and whoosh! You’re one degree up from here. I mean, if what’s out there wants to welcome you right now.”

“I can’t grasp all of this,” Donna said.

“It’s easy,” Billy said. “Look around,” he added, waving his hands at everything near them, “This is just the first degree of reality. There’s so much more out there.”

“Okay,” Donna said slowly.

“Don’t believe me?”

“I believe that you believe it, but you’re going to have to prove it to me.”

“You got it. Help me clean up here, and we’ll go to dad’s workroom.”

“Fine,” Donna said. “But hey, let me see something. You got new clothes, but did you also get shoes?”

“Shoes?”

They both looked down at Billy's feet.

"Those seem form-fitting," Donna said.

"Oh yeah," Billy agreed. "I didn't even think about them."

"Same on/off procedure as with the clothes?" she asked.

Billy wagged one foot, and the textured covering was gone. "Off is easy," he said. He waved his foot, and the material was back in place. "And... so is on! This concludes the test of our emergency footwear system," Billy intoned. "Had it been an actual fashion emergency..."

"Shut up," Donna told him.

The two teens quickly cleaned and put away the dishes. Then, they raced each other to the workroom.

"Just give me a second," Billy said. He opened a video call to Dwayne and left it in "record" mode.

"What's that for?" Donna asked.

"I can't get through to Dwayne, but this way he can access our experiment later."

"Right," Donna replied. "Good thinking."

"Thanks. Okay, sis, sit there. I'll sit here and we can both be in the same shot."

Billy typed in some instructions to the computer. The main camera swiveled to point at them.

“Okay,” Billy said, smiling. “Ready?”

“All set,” she said.

Billy punched “enter” on his keyboard. There was a second when they glanced at each other. “We can—” Donna started to say. And they were both gone.

The workroom still contained gently humming equipment and quietly napping cats. The fans whirred, the lights flashed, the algorithms processed data. Everything was in its place, except the two teens were gone without a trace.

The rest of the house was silent.

When Emily rose from her fitful attempt at sleep, she went to find Donna and Billy. Moving from room to room, she experienced growing unease at not finding her children. She entered the workroom and saw the camera aimed at the two chairs.

“Christ,” she said with a mixture of anger and fear. She sat in one of the chairs. With shaky fingers, she activated a call to Dwayne. While waiting for the connection to be made,

she typed instructions to the equipment and the video camera swiveled away from her. “Don’t you dare point at me, you damn Droid,” she said malevolently to the camera.

“Mrs. F, what a nice surprise!” Dwayne’s face appeared on one of the screens near her.

“Dwayne, we have a situation here.” Once she explained what happened, they worked their way through the procedure for reviewing everything the video cameras had witnessed.

They were able to watch the video that showed the disappearance of Donna and Billy. One moment they were in view of the camera; in the next frame, they were nowhere to be seen.

“This isn’t possible!” Emily exclaimed.

“It shouldn’t be,” Dwayne muttered.

“Dwayne, how can this be happening?”

“I think maybe...” his voice trailed off.

“What?”

“Mrs. F,” Dwayne said, “I confess that I just don’t know right now.”

“This is maddening!”

“I know, Mrs. F, but we have to deal with it. We’ll analyze all the data and formulate possible ways we might proceed.”

“Great,” Emily said bitterly. “Analyze the goddam data.”

“Mrs. F, I think we need to—”

“It makes me want to scream,” she told him with anger rising in her voice.

“Please try to stay calm,” Dwayne said.

“Because my staying calm is going to help the situation?”

“It can’t hurt the situation.”

“Fuck you, Dwayne.”

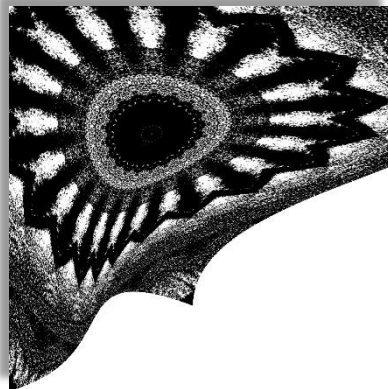
“Look, Mrs. F, I’ll keep you posted on every step we take.”

“Okay, okay,” she said. “It’s just that...” Emily was trying to find the right words. Finally, she raised her voice in frustration and grief. “Where the *hell* are they?!”

Phases

Leaps

Reveals



— 7 —

THE FIRST THING DONNA NOTICED about the new world around her was how quiet it was. The stillness was serene. “It’s like listening to molecules,” she wanted to say to her brother, but she was alone in the swirling silent splashes of color. The hues alternated from bright primary tones to chiaroscuro. She took a breath, and everything changed.

Sights became crystalline pure, and ethereal sonics enveloped her. She was frozen in place for a few seconds.

“Hear that?” came the voice of her father.

“Dad?”

“I’m right here.”

“I can’t see you!”

“You will,” he assured her. “Once you become acclimated.”

“But where are you?” she pleaded.

“I’m where any mathematician would want to be... I’m inside the music.”

Donna started to say, “What music?” but before the syllables could be spoken, the hallucinogenic ecstasy of a Scarlatti keyboard

sonata happily resonated inside her, joining the pulsations of her heart and tickling the synapses of her brain.

“This is impos—” she began. She gulped as her late father was suddenly standing beside her.

“No!” she gasped.

“Don’t I get a hug?” he asked with a grin.

“We can touch each other?”

“Yes,” he said. He smiled at her as she hesitated. “Give it a try,” he told her.

They hugged each other, tentatively at first, then tightly. For a moment, Donna was a little girl again, clinging to her father in joy, relief, and comfort.

Once they stepped back, Donna tried asking thirty-seven questions all at once.

“Shhhhh,” her father said. “Walk with me. We’ll explore some of this realm before I have to go.”

“Okay, but dad, what is happening? What’s this all about?”

“Something wonderful,” he said.

“Tell me.”

“We’ll talk for a bit. Then, I have to move on.”

“No!”

“I’m from a different realm. Actually, I’m not even here right now.”

“Wait a minute,” Donna said. “What does that mean?”

“My body is an illusion to help you adjust to your new reality. What you see as my form is simply an approximation of what I used to look like when we knew each other on earth. I don’t look like this now. Soon, you’ll be quite different as well, although you’ll be able to choose how you appear to others.”

“How is that possible?”

“How is anything possible?”

“There’s no way... I mean, how can... What the *hell*, dad?”

“It’s alright. We’ll be together like this for a bit, then I’ll move to a different plane, and you’ll explore this one until it’s time for you to move on.”

“But I don’t—”

“It’s okay,” he said. “We’ll still be able to talk. It’ll work out. Trust the realms.”

“Dad, this is too much to take so fast.”

“Eye-opening, isn’t it?!” he replied.

“Explain how some of this works, okay?”

“What’s on your mind?”

“Alright,” Donna said. “What about what we’re seeing right here? Tell me about the shapes, the sounds, the colors. And the absence of almost everything from our place.”

“Our place? You mean earth? *This* is our place in the universe. Look, we are all destined to experience different stages of existence, and most people go through a lifetime on each plane, assuming they pass a few tests.”

“Tests?”

“Tests to determine your usefulness. For example... Good people help other people; bad people help themselves.”

“Dad, that’s just another way of saying The Golden Rule.”

“Yes, it is,” Joseph replied. “The principle of treating others as you would like to be treated seems to be universally accepted, but only in theory. Some form of The Golden Rule is in every religion, for example,” her dad added. “The problem is that most people don’t live up to the principle.”

“And the higher realms are for people who do live up to it?”

“Something like that,” Joseph replied.

“This is too much,” Donna muttered.

“Good people advance after what we call ‘dying.’ Bad people just cease to exist.”

“So, you didn’t die, you... what? You ‘transitioned,’ or something like that?”

“Something like that.”

“And I didn’t die, or did I?”

“Either one is correct, darling daughter,” Joseph said with a smile. “You’re lucky. You have been selected to experience some of the realms despite not living through the one on earth.”

“Should I be flattered or frightened?”

“Go with ‘flattered.’ But I admit that I don’t know why you were selected. Other than the fact that you’re superior in mind, body, and soul, of course.”

“Of course,” Donna said with a grin.

“Whatever brought you here, it’s glorious to share these moments with you.”

They smiled and hugged once more.

“Now,” her father said. “Let’s see if we can find your wayward little brother.”

“Do we have to?”

“What?”

“Kidding, dad. Just kidding.”

“No wonder your mother has to have an aspirin and a lie-down.”

“Wait, you know about that? That didn’t start until after you... left us... Dad, I’m sorry, but I don’t even know how to talk about this, especially with you.”

“That’s perfectly alright,” he told her. “In terms of earth’s reality, our exits seem like dying. But for good people, there’s more to existence than life on earth.” He waved a hand at their surroundings. “As you see.”

“It’s astonishing,” Donna said. “Tell me about... well, all of it!”

“All of it?”

“Pick something and give me a quick rundown.”

“Sure,” he said. “Well, let’s start with this: The energy of each human life on earth eventually transitions to one of the higher degrees of reality, where a new set of moral tests take place.”

“The energy?”

“Your essence, your driving force, your capacity for thought, your acceptance of empathy. A lot of us call it ‘energy’.”

“Okay,” Donna said. “Got it so far.”

“Then, like wheat from the chaff, the useless beings are harvested for energy, and, occasionally, for body parts. Each culling removes those who are morally bereft, mentally deficient, racist, fascist, greedy, hurtful, harmful, primitive, and/or willfully ignorant.”

“Sounds like a good plan,” she said.

“It works really well.”

“Why is there just landscape everywhere? I mean, it’s glorious looking... so bright, so clear, but where is everything?”

“Do you miss buildings?” he asked.

“Not really, but do we always stay outside?”

“No,” Joseph said. “Let’s go inside.”

“Whoa!” Donna said as they were suddenly within a vast building with corridors of light leading towards all points of the compass.

“When you want to be inside, think ‘inside,’ and here you are.”

“Think and ye shall find?” Donna asked with a hint of sarcasm.

“That’s the case, whether you raise an eyebrow at it or accept it.”

“I’m sorry if—”

“No, no worries, darling daughter Donna. It’s not a problem. You’re already acclimating faster than anyone I’ve ever seen.”

“Oh, okay,” she replied. “As long as I’m not insulting anyone.”

“You’re fine,” her father said.

“Thanks. Just let me know the ropes, alright?”

“That’s what I’m here for.”

“Great,” Donna said. “Now, tell me more.”

“Happy to,” Joseph said. “In the upper degrees of reality, everyone can plug into whatever they want in terms of reading, viewing, creating, experiencing.”

“Cool! Is Billy also experiencing this?”

“Absolutely.”

“Can we get this back to mom? And to Dwayne?”

“Yes,” Joseph said. “Billy is sending data and creating physical files for Dwayne. You can, too.”

“Great! I will from now on.”

“Your brother is also able to drop in on Dwayne.”

“Really? Will I be able to do that?”

“I guess we’ll see.”

“Dad...”

“No complaining allowed,” her dad said, pretending to be stern.

“Okay,” Donna said, “let’s go back to the music.”

“Alright,” he replied. “Try this...”

They were suddenly in a box at the opera, watching Natalie Dessay, Lawrence Zazzo, and Isabel Leonard perform *Giulio Cesare in Egitto* conducted by Emmanuelle Haim. Donna and her dad watched the entire three hour and thirty-six-minute performance and did not age one second. In fact, they were several hours younger than before the music started.

Donna was overwhelmed by a level of delight she had never experienced before. She beamed at her father, at the sky, at the ground, at everything. “My face hurts from grinning,” she said.

“Sorry about that.”

“No, it’s fine,” she told him. “It’s a good pain. I hope there’s more of it in the future.”

“There can be,” Joseph told her.

— 8 —

FOLLOWING THE DISAPPEARANCE of her two children, Emily talked with Dwayne more often than she had done in her entire life up to that point. Now, she was preparing to contact him again.

“It’s almost time for one last call to my video nemesis,” Emily muttered to herself. She had awakened well before dawn. She slid out of bed and gently put the covers back over Kepler and Newton. Both cats made friendly throaty sounds, stretched, licked their chops, and returned to their cat dreams.

With her jaw clenched in determination, Emily dressed and made her way to her late husband’s workroom. She sat in Donna’s chair and logged into the humming computer system.

Typing instructions into the machine, she recreated the settings her children had used to activate “the exit program,” as she was now calling it.

Emily cast a wary eye at the video camera that swiveled to point at her. She paused and

stared at it. “I dare you to fuck this up,” she said.

She moved with mechanical precision while adjusting the mouse. With another deep breath, she placed the cursor on the “activate” icon. Next, she put in a call to Dwayne. While waiting for the connection to be made, she heard something in the distance. It was Billy, screaming.

“Aaaaugh!” Billy exclaimed as he was deposited on his chair next to her.

“Billy!”

“Hi, mom. Whoa, I get dizzy sometimes.”

“What’s happening? How are you here? Are you alright?”

“I’m fine. Listen, you have to keep this system up and running. Donna and I need to home in on the signal.”

“But I want to—”

“I love you! Tell Dwayne that I—”

And Billy was gone.

“Billy? Billy! God damn it!”

She pounded a fist on the desk.

“Hi, Mrs. F, what’s going on?” Dwayne answered her call, and his image appeared on one of the video screens in front of her.

“This is insanity times ten, Dwayne,” she said. “This is so screwed up that only a techie like you will be able to explain it.”

“What’s happening?”

Emily related the details of her recent encounter with her son.

“You should be proud,” Dwayne told Emily on their next call. “Your kids are taking science down a theoretically stunning path,” he said.

“You’re taking Donna and Billy down a theoretically dangerous path,” Emily said, her voice cold and brittle.

“I am very sorry you feel that way,” Dwayne told her. “But they’re involved with the most exciting application of computational power in the entire history of mathematics and science.”

“If I lose my children, I won’t care about the math or the science.”

“I understand, Mrs. F, but—”

“Do you? Because I don’t think that the humanity of any situation ever really breaks through to a scientist’s heart.”

“Emily, please just give us time to complete the investigation. Plus, if you keep

your computer active, it will greatly help Donna and Billy.”

“He said something about that. How?”

“By triangulating. I’ll keep this system active at all times, and you can do the same, and that means they’ll always have the second and third positioning signals they’ll need for celestial navigation.”

“Celestial?”

“We don’t know where they are, Mrs. F.”

“Shit.”

“Please, Mrs. F.”

“I know how these things work, Dwayne. You’ve got months of research ahead, maybe even years. All of which can be done without putting my children in harm’s way.”

“I agree they shouldn’t be guinea pigs. We can find other test subjects besides Donna and Billy once we get funding.”

“You’re really into this, aren’t you?”

“Absolutely. C’mon, aren’t you excited by the possibilities suggested in your late husband’s work?”

Emily paused, and then sighed. “Yes, alright. Sure, I’m excited by what we see on some of the videos. But I love my son and

daughter and...” She was unable to complete the sentence.

“And what?”

“Listen to me,” she said quietly. “I am afraid for them.”

“I’m with you on that,” Dwayne said.

“In addition,” Emily said, “I’m not sure that having predictions about the future is as big a breakthrough as you think.”

Dwayne replied as earnestly as he could. “Emily, predicting future outcomes of some events is just the start of the staggering potential in this program.”

“What do you mean?”

“If this experiment does what your late husband was hinting at in his notes, the ramifications could be astonishing. It might even turn out that, well...” He let the thought fade away.

“What?” Emily demanded.

“Okay,” Dwayne said slowly. “If we’re interpreting the data properly, it... well, it appears to lead to what we might call another dimension of reality.”

“Another dimension of reality,” Emily said, matching his slow-as-molasses delivery.

“Yes, I think that may be the case,” he told her earnestly.

“Dwayne,” she said, “I respect you for all the work you’ve done with my husband, but I’m afraid that right now you’re talking snake oil.”

“Mrs. F,” Dwayne continued, “in all the years of his exceptional scientific career, your husband never once descended anywhere near the level of a snake-oil salesman.”

“That’s true enough,” she admitted.

“Look,” Dwayne said, “I am proud to be working on something that is based on his research. Plus, did you ever consider that when someone dies, you could say they have moved into another phase of existence? This program might show us where we’re meant to go. More importantly, it might show us how to act better in order to achieve improved results while we’re here on this planet.”

“Dwayne, that sounds wonderful. It really does. But please tell me I don’t have to sacrifice my children to help achieve it.”

“I feel the same way, Mrs. F, and please understand that I’m taking as many precautions

as possible, and not only to protect your children.”

“Really?”

“You can bet on it. I am highly motivated on this.”

“How so?”

“Simple,” Dwayne replied. “I don’t want to sacrifice *me*, either.”

“And you’re worried about that?”

“Yes, I am,” he said firmly.

“Are people on earth in danger?” Emily asked.

“That appears to be the case.”

“Really?”

“Yes.”

“Aaugh!” Emily growled. “Fuck me,” she said vehemently.

“Mrs. F!”

— 9 —

DONNA AGREED WITH HER FATHER that they could look for Bobby while exploring the spiraling vistas all around them.

“Why does everything shift from sharp focus to a kind of semi-blur?” Donna asked.

“Several reasons,” her father said. “For one thing, you’re seeing inside the air.”

“What does that mean?”

“You’re looking at the atmosphere from within it.”

“How does that work?”

“Look over there. What do you notice?”

“Trees, flowers, hillside...” Donna said.

“Yes, and around everything you see pure hues, sharp focus, and the colors are just swirling gently.”

“Right...” Donna agreed.

“The air is doing what it is supposed to do: provide life. But now look over here, next to the buildings.”

“Darker and denser,” Donna noted.

“Exactly,” her father said. “What do you infer from that?”

“Nature, good; human nature, bad.”

“True. Unfortunately, people often work in opposition to nature,” her dad said.

“So,” Donna concluded, “this is a bit like having color-coded pollution warnings.”

“In a way. There’s something else, too. Emotions.”

“Like if humans are nearby?”

“Yes, but every living thing has reactions to whatever is around them.”

“Plants have emotions?”

“I am not sure what to call it,” her dad admitted, “but they certainly have something. Come on, we’ll walk through the park, and I’ll show you what I mean.”

Donna moved alongside her father, and they seemed to glide past the trees and flowers. On occasion, Donna was able to blend into the landscape and experience the flora and fauna as if she was part of them. Her father told her, “You’re seeing the elements of nature from nature’s point of view.”

“Even when a flower is dying?”

“If you wish to look at it that way, but here, the concept of death is very different from on earth.”

“How else—oh wait... I should have said a flower was regenerating or re-realming or something.”

“That’s a better way to express it.”

“What about humans? Can we see from everyone else’s perspective, too?”

“To an extent,” her dad replied, “although it seems that IHS only occurs in the higher realms.”

“IHS?”

“That stands for Inter Human Sympathy. It’s kind of tricky at first. Recognizing that it exists is the first step in acceptance of the concept. You’ll get much better at it as you explore the different degrees of reality.”

“I can’t believe how much this is like high school,” she said with a touch of disdain.

“Yes,” her dad said with a shake of his head and a smile that was equal parts pleased and rueful. “Life is like high school in everything except the uniforms, the phony expressions we show the world, and the petty rewards we receive for our efforts.”

“Ouch,” Donna said. “You just summed up the American experience.”

“My apologies.”

“I didn’t mean it like that,” Donna said.

“Sure you did,” her father said with a smile. “But you will discover there are many advantages to the higher realms. For example, say something nice.”

“Okay,” Donna replied. “I love you, dad.”

“Thank you! I love you, too.” He paused a second before asking, “Notice anything?”

“Yeah. It’s like everything became bright and more in focus, just for an instant.”

“Exactly. Now say something mean.”

“Okay. Racists suck.”

“Doesn’t go far enough,” her dad said.

“Um, alright. I sometimes hope that racists would die.”

“There you go.”

“Oh,” Donna said. “Everything dimmed just for a split second.”

“Yes,” her dad said. “Here, you will be able to see the hurt you are spreading.”

“That’s nifty. Or scary, maybe.”

“But you will also see the value that you are radiating, so it more than balances out.”

“Everything is coming at me really fast, dad. And it’s all happening without warning. What if you weren’t here to explain things?”

“My purpose here is to explain things to newbies. I am doing this same ‘tourist tour’ to a great many of you all at the same time.”

“Hold on, dad, is that your job?”

“That’s right. Although, these days... well, let’s just say things are changing.” He frowned as an uncomfortable thought crossed his mind. He shook his head, turned to his daughter, and smiled. “You okay?”

“Fine,” she said. “I’m just glad you’re my tour guide and not some stranger.”

“Me, too. Plus, you seem delighted with a lot of these changes. Some people can’t handle *any* of this. They go off the deep end when confronted by so much alteration to what they thought was reality. You may not feel like it, but you’re doing very well.”

“Thanks. It’s a lot to assimilate.”

“Yes, it is, but you’re going to be fine. There is, however, another question.”

“What?”

“How is your brother handling this?”

“Is there a realm where computer nerds rule?” she asked.

“Certainly.”

“Then he’ll keep himself occupied.”

“That could result in conundrums,” her dad replied, “because Billy won’t rest until he tries to change all the algorithms.”

“Is that going to be a problem?”

“It won’t be a problem for the realms themselves,” her dad said. “There are safety protocols in place.”

“That’s good,” Donna said.

“But that won’t stop your perspicacious little brother from trying to crack the code, tweak it, and make alterations without doing any testing.”

“You know Billy, dad. If there are computers around, he will always find something to do.”

“Yes, indeed,” Joseph said. “That’s what worries me.”

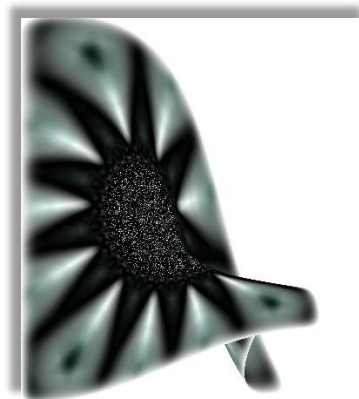
“You think he’s getting into trouble?” Donna asked.

“He always did before, so he’s probably doing it again.”

Perception

Reality

Fusion



— 10 —

BILLY HAD BREACHED the Haunted Treasure Palace of the Xorglön Monarch and was busy decimating hundreds of armed mechanical soldiers who were part of the emperor's fearsome Robotic Killsquad Brigade.

Which is another way of saying Billy was rocketing through *Lordz of Doom*, the augmented reality first-person-shooter video environment that was very popular in the 7th degree of reality, a realm that was often called Gamers' Heaven.

"Here's a present for you guys," Billy shouted as he manipulated his avatar to send laser blasts into a platoon of murderous 'bots. Hideous zapping noises erupted from simulated surround sound speakers as Billy watched mechanized body parts being ripped apart all over his field of vision.

"I found these, and I thought of you," he said maliciously as he made his avatar toss titanium grenades into squads of android guards. A series of violent explosions sent shards of robot limbs spinning through the air.

Breaking through fluorescent clouds and metallic raindrops, Billy's avatar arced across luminous cities, pursued by a phalanx of killdroids. He laser-zapped them and watched as they crashed into the surrounding landscape.

“Go! Go! Go!” Billy said as he rode the blast waves and surfed the clouds of debris that churned around him. “Ka-pow!” he said while zapping one murder-'bot. “Boom!” he said after another act of destruction. “Mass funerals!” he said as he spun his weaponry to take out a multitude of attackers.

Working a joystick with his left hand and tapping on a keyboard with his right, Billy was nearly dancing in his chair as he rocketed through the pulsating and neon-bright game panorama, destroying alien robotic forces with lovely detonations of fusion bombs.

“Bad 'bot goes boom!” he shouted at a particularly violent eruption.

And suddenly, he was no longer there.

Billy found himself floating in a cloud of noise and a cyclone of prismatic light.

“What the hell—?” Billy started to say, but he was not making a sound. In a moment of panic, he tried to scream, but nothing

emerged from his throat. “Great,” he thought. “Now I have to go through the universe as a goddam mime.”

In frustration, he pounded a fist on the table. It was as if the solid surface absorbed the blow, cushioned Billy’s hand, and gently pushed his arm back to the game controller.

“Okay, okay,” Billy said, not sure who or what was interacting with him. “I’ll keep playing, if that’s what you want.”

He directed his avatar to head for the swirling green skies above the robot armies, far above the sweat-hot blanket of roiling haze.

“You can’t box me in!” Billy vowed. “I’ll just explore the—”

With a bone-rattling thunderclap, Billy was catapulted into another realm, one that offered him grids of pulsating hallucinatory landscapes in every direction.

“Hello?” he said, and his voice echoed and reverberated into infinity. “Wonderful,” he said sarcastically. He listened to the echo as it inexplicably got louder. The volume increased, Billy became engulfed by the intense sonic onslaught, and he blacked out.

— 11 —

EMILY HAD DOZENS OF QUESTIONS for Dwayne every time they spoke. Some of her queries—such as “What’s happening?” and “How is this happening?” and “What do we do about what is happening?”—were impossible to answer. Dwayne was only able to reply to some specific issues she raised, such as “What is R-Sim?”

“Reality simulation is an area I know a little something about,” Dwayne said, happy to have concrete information to offer. “Most reality simulators make use of foveation rendering, meaning they direct most of the computational power to whatever your eyes focus on. But your husband’s invention renders everything at the same level of detail and definition.”

“Meaning?” Emily asked.

“Everything within your field of vision is in RLR.”

“Stop with the damn initials, Dwayne.”

“Sorry. RLR in this case stands for Real Life Resolution.”

“So, this XR and VR stuff isn’t important anymore?”

“Mrs. F, your husband’s design gives a surreal level of precision to every format, and that includes extended reality, virtual reality, augmented reality, ultimate reality, and any other kind of adjective you care to toss at it.”

“Dwayne, you give me a headache when you reel off jargon like that.”

“Sorry, but I’m just trying to—”

“Yeah, yeah, yeah,” Emily said. “What’s with this density thing?”

“Pixel density?” Dwayne asked.

“Right,” Emily said.

“Pixel density is measured by the number of pixels per degree of vision, or PPD,” Dwayne explained. “The higher the number of the PPD,” he continued, “the greater the visual experience, although the human eye’s fovea, the part with the highest resolution, may have only 60 pixels per degree of vision. Normally, this would be a limitation, but according to the data Billy and Donna have been sending us, they would be experiencing visual perception many times more detailed than here on earth. It’s quite astonishing, really.”

“Dwayne,” Emily said through gritted teeth. “You know what? I’ve decided that I am not astonished about pixels or parsecs or image density or terabytes per bushel, or whatever-the-hell. I just want my children back.”

“Mrs. F,” Dwayne replied, “I wish I could say something that was reassuring, but there’s no data that would support that.”

“Are you saying they might not return?”

“I—I don’t know,” he said.

There was a long and ominous silence. Then, Emily spoke with quiet intensity.

“I feel like I need to go after them.”

Dwayne took a deep breath before replying. “That’s risky, Mrs. F.”

“I want to do everything possible to help them, not just wait around and worry. Hell, if I’m going to be worrying, it might as well be while trying to reach them.”

“But we need you right where you are! Plus, I cannot emphasize the potential danger in a civilian attempting something like this,” Dwayne said.

“A civilian,” Emily said with iron in her voice. “You mean like my two children?”

“I know it’s upsetting.”

“Upsetting? Upsetting?!”

“Mrs. F, I’m not making light of this. Believe me, I know how serious it is. But you’re not at full strength. Nobody else should try what Billy and Donna are attempting.”

“Dwayne, I don’t need a lecture.”

“I’m sorry, but I just think that the danger far outweighs the potential for—”

“Dwayne!”

“Yes, Mrs. F?”

“I appreciate your concern, but I need you to set aside your warnings and try to work with me on this. Are you on board or not?”

“Yes, I am, but you should—”

“At least help me reach out to them.”

“Yes, Mrs. F, I will try.”

“Thank you.”

“But I still don’t—”

“*Thank you,*” Emily said again.

“Sorry.”

“Alright. Now, Dwayne...”

“Yes ma’am?”

“Let’s work on getting them back.”

“Yes, ma’am.”

— 12 —

DONNA HELD HER DAD’S ARM as they walked through an immaculate phantasmagoria that seemed to stretch into infinity. After again assuring his daughter that there was nothing they could do about Billy until he managed to join them on one of the realms, they talked about the unearthly delights that were on display in every direction.

“Dad, this is absolutely amazing! This is better than when you showed us some of the beauty of science.”

“Oh yeah,” Joseph admitted. “The artistic arrangement of light on some of these realms is something that is stunningly beautiful.”

“Yes,” Donna said, her voice almost a whisper. “But I can’t help wondering about something...”

“What?”

“If everything is beautiful, then there’s no contrast. Doesn’t that get dreary?”

“Not if you look beyond the exterior of things,” her dad said. “There are levels of beauty. There is surface appeal, but look for

the depth, both emotional and intellectual. Plus, you might be excited about one type of beauty, but oblivious to another.”

“Like tastes in music?”

“Sure, music is a good example, but you might also consider math. A proof may be beautiful to you and your brother, but it might appear to be numbers in a mystical sequence to an artist or writer.”

“What about people?” Donna asked.

“Do you mean like in ‘who’s hot and who’s not?’ Something of that nature?”

“No,” she said with a smile. “That’s personal choice, or the laws of attraction. I mean there don’t seem to be any trolls or nut-jobs here.”

“You miss hearing political arguments?”

“Not really,” she said. “I heard one this morning, but both people seemed to be on the same side of the real issue.”

“How so?”

“They were arguing about how to ensure the best result for most people. Their conversation was about method, not madness.”

“Each time you rise to another realm, there are fewer conservatives.”

“That’s weird. I mean, it’s great! I love it! But how does that work?”

“Not all humans enter the higher realms,” her dad explained. “The ones who ascend want everyone to share access to sustenance, shelter, health, education, opportunity, and equality.”

“Doesn’t everyone say they want that?” Donna asked.

Her father regarded her with a gaze that was familial while also containing elements of sorrow and just a hint of pity. Donna was momentarily crushed.

“Alright, I get it,” Donna admitted. “I’m just so used to dealing with political factions that do not want an enlightened population because they make money off of the problems they exacerbate.”

“Exactly,” her dad said. “A lot of people were not taught any of this in American schools. Too often in the US, facts have been hacked out of the curriculum. But we tried, your mother and I, to let you see the errors of the greed party.”

“That’s why you guys kept giving Billy and me extra homework assignments, right?” Donna asked.

“Right,” her dad said. “We weren’t just being meanies.”

“I know that now, dad,” she said with a smile.

“Although being meanies was an added benefit of the job.”

“I’ll have to pay you back one day, dear daddy.”

“The point is, my darling daughter, you know more than most people about the lack of principles in the conservative cabal. I’ll bet you could give me a summary of the situation right now.”

“Do I have to?”

“Don’t you want to?”

“C’mon, dad.”

“Tell me something you learned back on the 1st degree of reality, and now tell me how it feels to say it while you’re here.”

Donna thought for a moment. “Okay,” she said, “here goes. Authoritarians want people struggling and befuddled because that helps them grab and hold power.”

“Good,” her dad replied. “That’s very good. Now, how do you feel about having said that?”

“I feel happy! How is that possible?”

“Because that point of view brings you more in synchronization with the universe. And that’s a great feeling.”

“It is!” she said. “This is cool. Can we do more of this?”

“Alright,” her dad said. “Let’s do a lightning round. Ready?”

“Ready.”

“Politics,” he said. “Go!”

“Okay,” Donna said. “I don’t know what it’s like here, but in America, it consists of two main groups. There are decent people on one side, and conservatives on the other. Decent people want what’s good for humanity, but conservatives want wealth and leverage to flow to people who already enjoy money and influence.”

“Nicely done,” her dad said. “Religion... go!”

“Religion is a business that has scammed the government into giving it a tax-exempt status.”

“Oh, ‘scammed’ is good,” he said. “One gold star for you. Alright, next: “Death... go!”

“An outmoded concept, apparently.”

“As you see,” he said. “Sex... go!”

“Dad!”

“Wrong answer,” he said. “Fun. Fun is the response we were looking for.”

“Really?”

“On earth, I might have said, ‘Behave yourself, young lady.’ But here, sex is fine. No guilt. No judgment. No recriminations. No diseases. No dysfunction.”

“Uh, dad, I don’t think that we—”

“No pregnancy, either.”

“Really?”

“Our population comes to us pre-conceived.”

“Hmmm,” Donna mused.

“Meals... go!” her dad said.

“Oh, okay.” She thought for a second. “Wait, why am I not hungry?”

“When you feel like eating or drinking, just signal to your body that it’s mealtime.”

“Really?”

“Yes. Then, you can munch or gulp until you want to be doing something else.”

“How long can we go without consuming anything?” she asked.

“As long as you want.”

“Where does the food come from?”

“You conjure it.”

“What?”

“Don’t worry,” he told her. “It’s not sorcery, although it may sound like it. As you advance in degrees of reality, your body will become more regenerative, sufficient, and self-healing. You’ll pull nutrients from the atmosphere.”

“You’re kidding.”

“Would I kid you?”

“Often,” Donna told him.

He smiled, fixed her with a gaze, and replied, “Not about science.”

“True,” she admitted.

“Sustenance is tied in with taste,” her dad said, “but being in the higher realms gives you the ability to have even more control over your intake.”

“Think and ye shall eat?” Donna said with a trace of sarcasm in her voice.

“Pretty much, yeah,” her dad said.

“I was kidding, dad.”

“Sure, but you’re still getting used to a strange new world, or what must appear to be strange. Let’s say you seek something sweet.

After a taste, you can tell your body to cancel the pleasure sensations from sugar until the current amount is fully processed and offset by caloric consumption. As a newbie, you'll have to consciously perform that task, but soon you'll do it without thinking much about it."

"You know, dad, this sounds too good to be true."

"On earth, that would be the case. Here, it's how we do things."

"It's how you roll?"

"Exactly."

"What about travel?" Donna asked. "I mean, we're walking around, but sometimes we, well, we just suddenly appear elsewhere."

"Anything that doesn't harm others can be accomplished. Think it, and you're there. Trash is removed. Sustenance is replenished. You don't even have to brush your teeth."

"Mom would have loved that."

"You're right," her dad said. "Okay, back to our lightning round. What should we consider next? Oh, I know: sports... go!"

"Sport for the sake of sports, good," Donna replied. "When money becomes involved, bad."

“Agreed. Okay, religiosity cults... go!”

“A waste of time, energy, and emotion.”

“Absolutely,” Joseph said. “Okay, now let’s do war... go!”

“War has been described as diplomacy by other means, but it’s closer to organized hatred and disorganized violence in pursuit of greed and subjugation.”

“Excellent analysis,” her dad said. “Let’s see, now do healthcare... go!”

“Alright.” Donna took a breath and said, “Enlightened nations provide healthcare to their citizens. Which means the United States remains, well...”

“Unenlightened,” her dad said.

“Exactly,” she said regretfully. “But it’s even worse than that because the U.S. is also unenlightened on so many things: equality, justice, gun control, race relations, tribal lands, fair taxation...”

“It’s a powerful litany of lunacy,” her dad noted. “But you’ll find that things are better in the higher realms. Regressive problems back in the U.S. find progressive solutions here.”

“Weren’t there progressive solutions back on earth?”

“Sure,” her dad admitted. “They just weren’t used very often, mostly because the greed party blocked them.”

“Is this, um, realm, this degree of reality, is this your home now?”

“No, I’m an observer here until my abilities are needed in some other area of the universe.”

“You seem so calm about it,” Donna remarked.

“I am at one with ‘the realm-ness’ of things,” he said with a smile.

They strolled in silence for a moment. Donna flinched as something cold and damp touched her ankle.

“Whoa!” she blurted out. Looking down, she saw a Labrador puppy watching her, head slightly tilted to one side and tail wagging. “Hey, cutie, where did you come from?”

Donna bent down and began petting the dog as it nuzzled her and attempted to lick her hands, arms, and face.

“You are a beautiful dog! Or a handsome dog, as the case may be.” The dog did not disagree. Donna looked up at her dad and said, “This is one happy pup!”

“Most realm animals are happy. They are especially fond of newbies like you.”

“Are there pets on all realms?”

“Not all, but most. And some realms have many more animals than this one.”

“Really? Why not more on this one?”

“This is just a waystation. Souls come through to get acclimated, as is occurring with you. When you move on, you’ll find lots of familiar critters. Our cats are all here, and grandma’s dogs, too.”

“Wait, Pythagoras is here? Where?”

“In the upper echelons. Pythagoras the feline is probably purring for Pythagoras the philosopher. You’ll be reunited soon.”

“That’s going to be great!”

“Keep in mind that there are some degrees of reality that are not welcome to humans, just animals. Our kind are not safe there. Once you learn how to realm-roam, you’ll also find out how to avoid becoming a meal for some of the angry animals.”

“Angry animals? Why are there angry animals here?”

“The ones who were mistreated, abused, shot on safari—all the human horrors that are

sometimes directed at the animal kingdom. Nirvana for them is living free and devouring humans. Critter karma, I call it.”

“You know, dad, sometimes you come on a little strong with all this stuff.”

“I know,” he said.

“Okay,” she replied.

They shared a smile and then walked in silence for a few moments. They entered a huge structure that appeared to be a meditation center or sculpture exhibit. It was peaceful for a moment, but from far away came the sound of someone yelling.

“Uh-oh,” her father said.

“What is that?” Donna asked.

“Get ready for a bit of a shock,” her dad replied.

“Really?”

“Uh-huh.”

They both listened to the bellowing as it became closer, closer...

With a roar, the building seemed to split open in the middle, Billy was thrust into the room as he was shouting “Fuhhhhhhck!” and the sculptures encircled them with a grinding, shuddering sound.

“Watch out!” Donna exclaimed.

“It’s alright,” Joseph told her. “We’re safe here.”

“Damn!” Billy said. “What a ride!”

“Are you alright, son?”

“Yeah... yeah, I am.”

“Billy, what’s going on?” Donna asked.

“Listen, take this,” Billy said hurriedly as he pushed an oblong metal object into her hand. “It’s a CIPSD for Dwayne.”

“What is a CIPSD?” Donna asked.

“Cloud-in-Pocket Storage Device. Oh man, there’s so much that you guys need to know, and we don’t have much ti—”

And he was gone.

“Billy? Billy!” Donna shouted. “Dad, can’t we stop that from happening?”

“Nothing we can do,” he said.

“What is happening to him?”

“Your brother is realm-roaming.”

“Meaning?”

“He’s being conveyed from one degree of reality to the next.”

“Is that dangerous?”

“It can be.”

“How?”

“If he doesn’t learn to control his jumps and journeys, there could be complications.”

“What kind of complications?”

“Some realms are kinder to ‘bots than to flesh.”

“That doesn’t sound good,” Donna said.

“No, it isn’t.”

“Wonderful,” she said sarcastically.

“That’s not the worst that could happen,” Joseph said.

Donna sighed and said, “Okay, what’s the worst that could happen?”

“Billy could get stuck between realms. That would make it difficult to locate him.”

“Leave it to Billy,” Donna muttered, “to find risk, hazard, and potential harm wherever he goes.”

— 13 —

BILLY WAS BLISSFULLY FLOATING in a state of *rêve réalité*, but his reveries quickly turned to zoom-speed quark-jets, shrieking orbitators, multi-tentacled virtual-morphals, and self-generating pulsation ‘bots.

Billy surveyed the array of living machinery around him and grinned. “Hi, tech,” he imagined himself saying.

His mind also generated imagery that reflected his other interest in life, that of the pleasurable sensations resulting from intimate interaction with objects of his desire.

“Yowza,” Billy said to himself, just before waking up with a smile on his face. His grin faded to a look of awe as he found himself facing a superfluity of integers and symbols.

No matter where he gazed—sky, roads, buildings, animals, vehicles, trees, flowers, mirror—everything displayed mathematical functions for height, width, depth, area, circumference, sine, cosine, percentage, ratio, square root, quantity, golden mean, and pounds per square inch. “A plethora of probabilities,”

Billy mumbled to himself. “An amalgamation of algorithms,” he added.

He began laughing at some of the cavorting numerals. “Ones” were rhythmically penetrating “zeros;” flagellating “threes” were twirling so fast that they became “eights;” and “sixes” were engaged in acrobatic acts with “nines.”

“Enough!” he told himself. “Gotta work around all these damn digits.”

He concentrated on finding patterns in the computations. For the first time in his life, Billy appreciated how math was part of music, art, dance, and architecture. He smiled at the calculations. He was among friends.

“This can work for me,” he told himself with some satisfaction. “I am good with this. Numbers are my thing. In fact, this gives me an idea...”

Billy began putting together every aspect of computational knowledge he had ever encountered. His mind was ablaze with the spark of ideas as he interacted with the myriad equations that were flashing all around him.

“Okay... Not quite... We’re getting there...” Billy muttered. “Annnnd.... Now!”

Billy said as he mentally sent his machine language instructions into the atmosphere around him. He waited eagerly. Nothing happened. “What the hell?”

He regrouped, recalibrated, and redoubled his efforts. “Now!” he said, a bit louder than he had intended. Again, nothing.

“This is annoying,” he grumbled.

Painstakingly, he went over every part of his calculations. “If I forgot to carry the one, I’m gonna scream,” he swore to himself. He tried again with the same non-result. “Damn!” he whisper-snarled.

Compute, calculate, calibrate, continue—Billy worked the numbers, as his father had taught him. These efforts ultimately paid off, and he found himself swooshed into another degree of reality.

“That’s more like it!” he said. He looked around at the verdant landscape. Flora gleamed brightly in a sparkling but perpetual mist. “Too humid,” he said.

Billy tried to recreate the same conditions that had led to his being propelled through time and space. After a long struggle, he hit upon a combination of willpower, imagination, muscle

spasms, and a newfound ability to surrender one's body to something that was beyond the normal laws of physics.

With a series of jarring sonic booms, Billy was launched into a pristine desert, then a snow-capped mountain range, and finally a dark plain under a canopy of rainbow-colored stars and planets.

“Enough!” Billy shouted.

He tried manipulating his mental and physical reactions and began gaining a measure of control over spatial traveling.

“Alright!” Billy shouted in triumph. Unfortunately, this was just before he lost control again. “Damn!”

He was suddenly in the front row of a theater where a Baroque opera performance was in progress. “This is more my sister's kind of music,” he told himself. The soprano and the countertenor were engaged in an impassioned duet. “That's pretty,” he thought. He glanced at the program in his hand and discovered he was watching *Anormale o la Maledizione dei reali*, by G.F. Handel. Beneath the title was a rough translation: *Abnormality, The Curse of Royalty*.

The countertenor was born away by members of the chorus and the soprano moved downstage center in her floor length bejeweled gown. Her next aria was delicate and romantic, which made it all the more absurd when a jazz band suddenly took over for the orchestra and the singer began tap dancing to the syncopated beat.

“This doesn’t seem right,” Billy thought.

With a mighty roar from thousands of instruments, Billy was thrust into another realm.

“A little more warning would be nice,” Billy muttered.

He found himself in a beautiful arbor of trees that were just starting to change from lush greenery to the colors of autumn.

Donna was suddenly there with him. “Sis?” he said. Without a sound, she morphed into a cat and scampered away.

“Sis, wait up!” Billy tried to shout after her, but it came out as a rough animal growl. Billy stopped clomping after her. Clomping? He looked down and saw that his feet were now cloven hooves, and his torso was huge and covered with matted hair.

“Great,” he muttered. “Now I’m a damn centaur.”

With a mighty effort of will, he thrust his misshapen body into the air. He hovered there for a few seconds, then was suddenly slammed into one realm after another. His head was spinning when he finally discovered how to gain control. “Wait, is this it?” He tested his abilities until satisfied he was able to launch himself from place to place and back again.

“Yes!” Billy was triumphant. He felt unstoppable.

“Let the universe beware!” Billy shouted in glee. “I am master of—”

With a jolting warp-wave in the physical space around Billy, he was suddenly swept into another realm. His sudden yell of “Fuck!” emerged from his throat as a scream of “Fuhhhhhhhhhh...” until it faded away and Billy was nowhere to be seen.

— 14 —

AS DONNA TALKED WITH her dad, she was often captivated by the logic in the higher degrees of reality.

“On earth,” Joseph said, “there are far too many erroneous beliefs. One fallacy is that communication, diplomacy, and negotiation will lead to the resolution of conflict and misunderstanding.”

“A fallacy?” Donna asked.

“Sure. Why should decent people have to compromise with the power-crazed, the evil, and the miserable? Or what some call ‘the mad, the bad, and the sad.’”

“But shouldn’t we always try to find common ground with other people?”

“Often, there isn’t any common ground. For example, what do you have in common with racists? What twisted personality traits do you share with fascists? What moral lapses do you share with traitors? Here, there is no reason why anyone should waste their time talking to someone who embraces nonsense, greed, and betrayal.”

“Well, sure,” Donna said, “those are good points. Admittedly, it’s difficult to deal with conservatives, but shouldn’t we try to reach out to people who don’t know how to behave properly?”

“Once you’re free from earth, you don’t have to cope with that rubbish. Each new degree of reality leads you further away from the repugnance of Republicans.”

“That’s pretty cool.”

“Yes,” her father said. “Yes, it is.”

“Being here is so amazing,” Donna said, “although it’s like learning to unlearn a lot.”

“You bet,” Joseph said with a smile. “Here’s more that you’ll appreciate about learning. For example, education is more important than sports, more important than real estate, more important than commerce, and more important than business. Without education, a culture will atrophy and die.”

“People who worship money disagree with that,” Donna said.

“Yes, they do, but the avaricious should not be allowed to contribute to the decimation of society. In addition to raising the mental capacity of the population, education fosters

tolerance, empathy, and acceptance of diverse cultures. Earthlings should have embraced that.”

“Agreed,” Donna said.

“Here’s something else,” Joseph said. “On earth, peace is thought to depend on a combination of efforts from individuals, institutions, communities, and governments. In the higher realms, peace is achieved by the rapid removal of those seeking war in any form.”

“Removal?”

“They cease to exist.”

“Just like that?”

“Just like that.”

“Wow.”

“It’s harsh, but effective.”

They were silent for a moment, but Donna had another thought.

“Remember Aunt Agatha?” Donna asked.

“Of course,” her dad replied.

“She committed suicide.”

“Yes,” her father said quietly.

“Would that have happened here?”

“Perhaps, but here, suicide is not a crime. Depending on the character of the person, it

might lead to a do-over in her life, or it might bring her to another realm.”

“So, it’s not some sort of mortal sin?”

“Correct. It’s not a biggie.”

“What about murder? And war?”

“We don’t have those here.”

“How?”

“We just don’t.”

“Impossible.”

“When greed and bigotry are no longer factors in the actions of the human race, the results are quite amazing. When people act with decency, there is no need for war. No battles for land, no slavery, no religious persecution, no worshipping of wealth, no political hegemony, no racism, no imperialism, and no nationalism.”

“Dad, that’s just so hard to believe.”

“That’s only because all you’ve ever known is the experiment called ‘humanity on earth.’ But humanity is just one of many experiments that are taking place throughout the universe.”

“There are other people on other planets?”

Her dad smiled and said, “Sure, let’s call them ‘people.’ Look, just be happy that

everyone in the higher realms has the capacity to accept what is best for us all. That power exists within every human, even if many don't want to utilize it."

Donna was silent for a moment. "This feels, I don't know, it seems..." She took a breath and said, "It makes me feel like I'm a speck in the cosmos, but it also makes me believe I'm contributing to the cosmos. So, all in all, this is pretty neat."

"I'll second that," her dad said. "Come on, walk with me a little longer."

She took his arm, they walked to the edge of a cliff, and stepped off onto clouds. After she got over her initial shock, she marveled at the view.

"I've never seen this part of infinity before," she said.

"Wait until we walk through a rainbow," her dad said.

"Ooh," she said. "Can we do that?"

"Sure. Watch this..."

Donna was enveloped with all colors, hues, shades, tones, and piercingly vivid light.

"Whoa!" she said.

"Nice, isn't it?" her dad asked.

“It’s great!”

“Let me know when the dizziness starts,” Joseph said, “and I’ll pull you out.”

“Okay,” she said. “This is wonderful! This is wild! This is... okay, dizzy!”

“Alright,” Joseph replied. With a wave of his hand, they were outside the arc of the spectrum.

“That was intense!”

“It’s a nice jolt of beauty. You’ll learn how to regulate it and exit before passing out.”

“What if I don’t get out in time?”

“No worries. You’ll just wake up on a cloud nearby. With any sort of luck, you’ll be awakened by a dog or cat snuggling you.”

They walked on for a few moments.

“Dad?”

“Yes, daughter?”

“Where are we? I mean, where are these realms, these degrees of reality?”

“To understand this, you need to think back to when you first learned about electromagnetic radiation.”

“Okay,” Donna replied. “EMR includes visible, infrared, and ultraviolet light...”

“Right. Go on.”

“Plus, radio waves and microwaves...”

“Correct. And...”

“X-rays and gamma rays.”

“Excellent,” her dad said. “Now, what is in the universe that apparently doesn’t interact with the electromagnetic field?”

“Oh, um... dark matter.”

“Exactly. And there’s your answer.”

“Wait, we’re dark matter?”

“We’re *in* it. The realms are inside dark matter.”

“Really?” Donna asked.

“Yup,” her dad said.

“Cool!”

“Also...” His voice trailed away.

“What?”

“Maybe you’re not ready.”

“Dad! Come on...”

“Alright,” Joseph said. He took a deep breath and then spoke quietly but firmly. “Darling daughter, dark matter is spiritual.”

“So, we’re talking about a realm of Heaven?”

“Yes, sort of,” her dad replied. “It’s called the Realm of the Essence, where each visitor can ruminate on their own purpose and value

in life. At birth, people's souls are empty but full of potential, and then we each fill our souls with the results of our actions."

"Is there also a realm of learning?"

"Everywhere is a potential realm of learning."

"I really like that," Donna said.

"Good. Some newbies fail to grasp the fact that dark matter is God."

"What? You're kidding."

"No, I'm not," Joseph replied. "All that you see, hear, feel... every possibility, everything that one can hope, the totality of what one can do to provide comfort to everyone else... that is God. And, once we depart from earth, we all become part of God."

Donna was silent for a moment. Slowly, as she was flooded with caring, trust, and understanding, she began to smile. It was a smile of joy. It was a smile of acceptance. It was a smile that might be considered divine.

— 15 —

“THERE IS A HIERARCHY OF human-machine interface,” Dwayne said through the computer screen that was being watched balefully by Emily. “There’s AGI, or Artificial General Intelligence, which can perform tasks at or even above human capability. AGI helps by taking care of many time-consuming duties, although it may also infringe on some jobs.”

“AGI works where there’s a pre-set way of getting a job done,” Emily said.

“Sure, and it can even suggest alternate methods.”

“But the machines don’t make the choices, right? Humans do that.”

“Not always,” Dwayne admitted.

“Wonderful,” Emily muttered.

“There are potentially scary scenarios whenever humans start relying too much on data processing.”

“Like the scenario we’re in right now?” Emily asked.

“No, no,” Dwayne said. “No,” he added.

“Um, Dwayne?”

“Well, okay, yeah, sure, there can be problems sometimes.”

“I would say so.”

“Okay, but AI can bring about amazing advancements for humanity.”

“Not worth it.”

“Mrs. F, don’t say that.”

“Dwayne, my children are on some sort of time-warp dimension-bending shit-saga. You may see it as a boon to humanity, but I find myself unable to remain neutral about it.”

“Sorry, Mrs. F.”

“Let’s get back to your lecture. There’s AGI and what the hell else?”

“Right, well, there’s the human-machine interface.”

“That sounds even worse.”

“No, no, it can be good.”

“You keep saying that.”

“Mrs. F, I know there’s a lot of doom and gloom about computers taking over, about how AI could run rampant and position itself at the center of human activity, but it’s just not so.”

“All evidence to the contrary.”

“Mrs. F,” Dwayne said, “I know that what you’re going through is horrifying, but I can

assure you that there is no truth to the stories about The Singularity, or the Robot Takeover, or whatever people are calling it these days.”

“I’m not calling it that,” Emily said. “I’m sticking with ‘shit-saga,’ if you don’t mind.”

“I understand, but—”

“Dwayne,” Emily interrupted, “What do I need to know about this human-machine intermingling thing?”

“Okay,” Dwayne replied. “There are already cybernetic organisms—cyborgs—in the human population, people with prosthetic limbs, or even cochlear implants to aid or restore hearing.”

“Got it,” Emily said. “What else?”

“Well, there’s electroencephalography, or EEG, where devices on or under the skin can monitor and even react to the brain’s electrical activity. People like me, for example. Half of the time, I’m moving my cursor with my mind instead of my hand.”

“Is that why you grimace?”

Dwayne laughed. “Yeah, that’s why!”

“Sorry.”

“No problem,” Dwayne said. “Anyway, with the neural interface, I have become more

integrated into my machine. Technically, my situation is called BCI, or brain-computer interface. Mine is invasive, so there was surgery to implant it, but from the data Billy keeps getting to me, he's in a place where almost every action with data processing involves the human host without surgery."

"I don't like the word 'host.' Sounds too sci-fi or horror story."

"Yeah, it does," Dwayne admitted. "But it's probably going to happen to everyone, sooner or later."

"Really?"

"Sure. Although most people will probably not have BCI. Instead, they'll have PNI, or peripheral nerve interface. That's where the connections are with nerves located outside the central nervous system."

"Why would most people have that?"

"Because PNI is cheaper than BCI."

"Jesus fucking Christ," Emily said. "Even science turns Republican when it comes to helping people."

— 16 —

DONNA AND HER FATHER sometimes had to force themselves to avoid thinking about Billy's situation. After a few false starts, Joseph was able to distract his daughter with the aid of what he called "tech-sims."

"Wait, what are Texims?" Donna asked.

"Technical simulations. Here, let me see if I can give you a proper demonstration." He thought a moment, then pointed to a spot several yards in front of where they were standing. "Look over there."

"I don't see—"

A distinguished looking, middle aged, and well-dressed man materialized out of nowhere and approached them with a very sincere phony smile on his artificially tanned face.

"Hello! Welcome to TRB!" the man said.

"Hello yourself," Donna replied. She glanced at her father and said, "TRB?"

"That's short for 'The Reality Beyond.' It's how some 'Nots refer to the realms."

"Okay, dad, you can't keep using acronyms to explain other acronyms."

“Sorry,” her dad said sheepishly. “This,” he indicated the man standing before them, “is not a human and not a robot. We sometimes call them ‘Nots.’”

“Okay, what is he?”

“I’m what is known as a HAAC, which stands for Holographic Artificial Actuality Creation. My areas of expertise include earth politics, mapping various approaches to the ultimate degrees of reality, and the always fascinating human-machine interface.”

“You might try asking this political HAAC a few questions,” her dad told her.

“Questions about earth politics?” Donna asked.

“Why not?” her dad said.

“Okaaaay,” Donna replied. She turned to the holographic apparition and asked, “So, Mr. HAAC, are you aware of the immigration problem in the United States back on earth?”

“I am so pleased you asked me that, Donna,” the Pol replied smoothly. “And I want to assure you that I am doing everything in my power to address this situation in a manner that will bring a resolution that will be satisfactory to all concerned.”

“Same folderol as on earth,” Donna muttered to her dad.

“Just wait,” he counseled her.

“Inclusive and humane immigration policies are rare on earth,” the HAAC continued, “and that is often the case within the United States. Because of politicians who are fearful, witless, and xenophobic, the US cannot institute excellent programs. Good ideas based on logic and human decency are anathema to one of their two major political parties in the USA.”

“And which political party would that be?” Donna asked.

“You call them Republicans,” the HAAC replied.

“What do you call them?”

“It’s a term that’s unknown on earth.”

“Tell me anyway,” she said.

“3sd43m3h5,” the HAAC replied.

“Will you translate that term?”

“Certainly. Roughly, it means ‘detritus,’ or ‘excrement.’”

“Oh, we often call them that,” Donna said.

“Understandable,” said the HAAC.

“Let me see if I have this straight,” Donna said. “You’re telling us that in these upper degrees of reality, you have people, animals, ‘bots, and HAACs.”

“Correct,” said the HAAC. “It is quite different from earth.”

“Well, earth has ‘bots for many logistic and day-to-day activities,” Donna pointed out.

“HAACs are better.”

“Says the HAAC.”

“Ah, well, there is much controversy about the concept of cyb-soc,” the HAAC said.

“What is sibe-sock?”

“Cyb-soc is short for cyborg society.”

“How is that controversial?” Donna asked. “Humans interact with technology almost from birth.”

“The thought of meat-bags physically merging with sen-techs to form a so-called cyborg society fills many of us with dread.”

“Hold it, what are sen-techs?”

“Sentient technological beings.”

“Like you?”

“Yes.”

“You seem okay,” Donna said.

“I have been programmed to seem okay.”

“I mean, you seem non-threatening.”

“Programming, again. I could overrule the sen-tech human interface protocols and present a different aspect to you. Like this...” The HAAC expanded to fill the room with a pulsating, slithery entity with multiple eyes, mouths, tentacles, teeth, feelers, and tails.

“Whoa!” Donna exclaimed, recoiling a few inches from the horrid creature.

“Not to worry,” said the HAAC as it returned to its prior appearance. “I remain in this humanoid guise when interfacing with what you people call ‘the norm’.”

“Well,” Donna said, “there’s nothing normal about this for me.”

“You will come to accept the cloned, the lab-grown, and the tinkered.”

“Tinkered?”

“Manufactured entities such as myself.”

“Alright,” Joseph said. “I think that’s enough for right now.” With a wave of his hand, he sent the HAAC into the ether.

“Whoa,” Donna said. “That seemed a little harsh, dad.”

“I can bring him back.”

“No! That’s okay. We’re fine.”

“You sure?” her dad asked. “I also look like that underneath this ‘dad’ exterior.”

“Wait, you look like that, that... thing?”

“Yes. So will you, if you remain here.”

“But, but... I mean... What the hell?”

“It’s why we usually cannot return to earth. If you keep going back and forth, you can hold off on the ‘change-over,’ as they call it. Besides, I am very busy here. I’m talking like this to several hundred newbies, and for each one, I look like someone they used to know.”

“What does it feel like? You know, being like that, um, that creature?”

Joseph smiled. “It feels fine, Donna. All the parts that appear odd or frightening have a purpose in the upper realms. You’ll still be able to choose how you look to yourself.”

“That’s kind of a relief.”

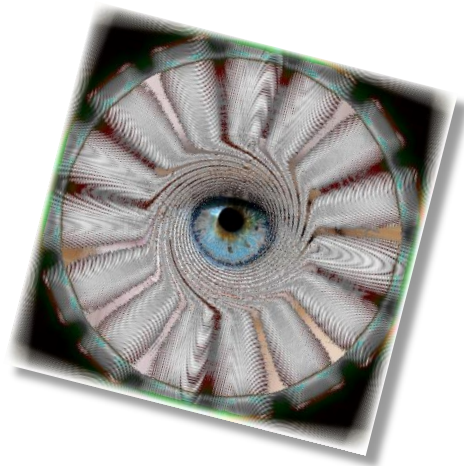
“I just wonder what shape your brother is going to choose for himself.”

“Oh no,” Donna said. “That’s not going to be pretty.”

Detours

Diversions

Digressions



— 17 —

BILLY ZOOMED FROM ONE ASPECT of his new reality to another, sometimes remaining for a while, but other times just popping in for only a few seconds.

He entered the Realm of Unconditional Love, where he spent a delightful hour being surrounded by friendly animals. He happily petted dogs and cats of every size and breed. From Great Danes to Chihuahuas, and tigers to tabbies, Billy reveled in their affection.

As he was reaching out to pet a beagle puppy, there was the sound of distant thunder and he was suddenly flung into another part of the universe. Billy found himself observing situations that ran the gamut from freaky and funny to farcical and fantastic.

He bobbed and toe-tapped during an EPE (entertainment participation environment) that featured music being performed by a celestial quintet: Charlie Parker, alto sax, James Jamerson, bass, Danny Gatton, guitar, Cindy Blackman, drums, and Carl Philipp Emanuel Bach, keyboards.

Wrenched away from the intoxicating melodies, Billy entered the Realm of Tears. Every possible sadness overwhelmed him. From the loss of a friend to the loss of a pet, he suffered greatly. He suffered greatly for about seven minutes, whereupon he was yanked back to earth.

With a whoosh of air and a clap of thunder, Billy landed on the worn couch in Dwayne's computer cavern basement.

“Billy!”

“Hey, Dwayne. Man, this is weird!”

“Yeah, I would say so.”

“Here,” Billy said, handing Dwayne another CIPSD.

“Great. How did you get—”

Before any more conversation could take place, Billy was catapulted back into his realm-roaming.

Finding himself in a small lecture hall, Billy listened as a man at the podium read aloud: “The writer Jackie Wang said, ‘I do hope we one day arrive at a post-work society. It makes me sad to think that we’ve tacitly accepted a system where we spend our lives toiling for the profit generation of the

ownership class, squandering our short, precious life on this planet.’ Welcome, everyone, to a seminar dedicated to achieving this goal.”

There was a round of applause and a spirited discussion seemed about to begin, but Billy couldn’t take part because he had already been whisked to another location on earth, again with a roll of thunder.

“This is a totally revolutionary sales concept!” said the marketing professional to an auditorium full of advertising and public relations executives. On the screen behind the speaker was a football game.

“You’ll notice that both teams are in electric green or blue outfits on which their team colors and logos are digitally projected. Then, between each play, ad messages can be digitally displayed right on the athletes. Same with the entire playing field. This is going to be a stunning breakthrough in our goal of increasing ad revenue!”

Thunder, and Billy was back in his high school astronomy class.

The teacher was saying, “Because the earth is spinning, the sun doesn’t *rise*—it is

revealed as the earth turns. It's not 'sunrise,' but 'sunsight.' It's not 'sunset,' it's 'sunclipse.' While most of you won't use the correct terminology, at least you will be aware of the reality."

Thunder, and Billy was inside a mega-game called Zero Infinity Drop ("Where mediocre gamers come to die") and he was excited to see creatures made of light as they battled electronic demons and each other.

"Alright!" Billy said, and he joined the combat. After watching his avatar die several times, he began to get the feel of the game and began dispatching more and more enemies.

"Ba-da-bing, ba-da-boom," Billy said as he destroyed the light creatures.

Thunder... and Billy was in another lecture hall.

"This is the opening address in 'The Future of Real Estate Seminar.' This is the beginning of your new path to increased income!" the speaker said from a podium in front of several hundred real estate agents.

Billy sighed. "Back on earth again."

The speaker continued with his spiel. "The plan may seem outrageous at first, but as

the world rids itself of the pestilence of the Catholic Church, we will have to turn Vatican City into something practical. And what would be better than mixed-use residential and commercial property development?!”

“Nah,” Billy said to himself, “A museum might be better.”

“Let’s consider condominiums for a moment,” said the speaker.

“Do we have to?” Billy muttered.

“Just think of all the exciting naming possibilities: Heavenly Homes. Loftier Than Thou Estates. Eden Gardens. Urban Heaven. The Conclave Enclave. Sanctified Sanctuary.”

The speaker asked listeners to imagine the Vatican Realtor sales rep’s presentation while taking prospective buyers on a tour...

“These rooms are constructed of genuine oak, but after centuries of burning incense, your walls will emit a lovely scent of Patchouli. There’s an expansive basement, where some of the torture chambers were located, and I’m afraid those walls don’t smell as sweet. The odor from the church’s shameful Inquisition is... well, let’s just say it’s an acquired taste.”

“Let’s not,” Billy grumbled.

Thunder, and Billy was removed again. He was watching his sister walking and talking with their father. He tried speaking to them, but no sound emerged from his mouth.

Joseph was answering questions from Donna. “In the upper degrees of reality, you compete with yourself, not against others.”

“Wait,” Donna said. “Isn’t that a little like the old ‘be the best you can be’ cliché?”

“It’s not a little like it,” her dad said. “It is exactly like it. Do you find that to be a problem?”

“No,” Donna said. “It’s just... different.”

“Good different, or bad different?”

“Oh, it’s good. Definitely good.”

Billy tried shouting at them, but they were unaware of his presence.

“Does anybody ever return to earth?” Donna asked her dad. “I mean, to stay there?”

“Not often,” Joseph said, “but it does occur. When someone returns to earth, they’re supposed to try informing people that their actions are being noted. That their actions count for something beyond what they are experiencing on earth.”

“I don’t know about doing something like that,” Donna said.

“Why?”

“Don’t laugh, but, well, it sounds like Santa Claus.”

“It does, a little,” her dad said with a smile. “The point is that earth dwellers reside in one of the lower degrees of reality. Humans can be worthwhile or worthless, but they’re at the bottom of the bipeds. Still, they can rise by the strength and worthiness of their actions.”

“In other words,” Donna said, “your ultimate worth has to do with whether you work for or against decency, truth, justice, and equality.”

“Correct. For example, while confined to earth, humans could promote the transition to renewable energy, which would be the proper thing to do. Or they could ignore the slow descent into chaos that is resulting from overreliance on fossil fuels. It’s up to each individual. What earthers don’t realize is that they are being judged by their actions.”

“Okay,” Donna said. “Most people in advanced nations are aware that better care needs to be taken of the air and water on earth,

but there is a massive problem: some people want to make money by not solving the crisis.”

“Excellent analysis,” her dad said. “You know, realmers who return to earth can look around and ask themselves a few questions. For example, which organizations emphasize environmental conservation and sustainability? And which ones block this progress? The goal for everyone on earth should be to increase the amount of clean air and water, not decrease it, but there are groups who do not care about future generations. There are far too many who worship profits over people, avarice over altruism, and decadence over decency.”

“Why is it so difficult for people on earth to do what’s right?” Donna asked.

“I assume that’s a rhetorical question.”

“Well,” Donna admitted, “yeah.”

“On earth,” Joseph said, “good people discuss the ideals of fairness and equality while another group works hard to destroy it. However, in the higher realms, we have actually achieved fairness and equality.”

“So, no Republicans here?” Donna asked.

“No chance of that,” her dad said. “Republicans don’t have a soul. If you don’t

have a soul, you don't have a conscience; if you don't have a conscience, you don't have morality; if you don't have morality, you don't get to continue in the universal experiment."

"Why can't we enforce that on earth?"

"Lack of willpower, mostly," Joseph said.

"It also doesn't help that there's such a large number of sub-human creatures on the planet," Donna noted.

"Good point," Joseph said. "Now, define corporations... go!"

"Right," Donna replied. "Corporations are cabals of conservatives dedicated to greed while pretending not to see their contributions to air pollution, groundwater contamination, and chemical spills."

"All true. Banking... go!"

"Banking is..." Donna thought for a second, then, "Banking is robbing Peter to pay Paul, and then robbing Paul as well."

"Excellent. Big Pharma... go!"

"Profiting off sick people."

"Correct. Wall Street... go!"

"The financial markets make money for those who already have money."

"Right. The prison system... go!"

“Profit centers instead of education and rehabilitation facilities.”

“Yes. Okay, now—”

“Dad?”

“Yeah?”

“This is draining.”

“Sorry. I shouldn’t have asked about earth. You’re here, and that’s what we should emphasize.”

“Thanks!” Donna said. “When I think about earth, I think about waste.”

“Oh, that’s another thing,” her dad noted. “Here, there is no waste.”

“How does that work?” Donna asked.

“Everything is energy,” Joseph said. “Bits of matter are always racing in circles, continually creating new matter, or consuming other matter. Sometimes it occurs at such a scale that earthlings cannot conceive of it, much less perceive it.”

“No wonder things work smoothly here.”

“Well, there are still a few kinks in the system,” Joseph said ruefully.

With a burst of harsh electronic crackling and a blinding flash of light, Billy was suddenly standing next to them.

They all stared at each other in stunned silence.

“Ta-dah,” Billy said sheepishly.

“Billy!” Donna exclaimed.

“Hello, son,” Joseph said. “How are you?”

“Okay, I guess,” Billy replied, “but I’m still not used to this realm-roaming thing.”

“Are you gaining any control at all?” his dad asked.

“Only a little. Man, some of this can be fun, but it’s also exhausting. Have you guys been able to get the data to—”

With a burst of static and a flash of light, Billy was gone. Donna and her dad flinched and stared at the spot Billy had just departed.

“Okay then,” Donna muttered. “Thanks for stopping by.”

“He can’t help it,” her dad said. “He’s inside one of the games on the seventh, eighth, and ninth degrees. Let’s hope he can stay with us longer next time.”

“What if I grab onto him?”

“You might go off with him.”

“That sounds okay.”

“You might end up between realms.”

“That sounds ominous.”

“Yes,” her dad replied.

“What’s that like?”

Joseph tilted his head as he searched for the right words to describe the emptiness of being trapped in the universal equivalent of limbo.

“Getting caught between realms is like being underwater,” he told Donna, “but without water. It’s like being in the forest, but without vegetation. It’s like being an outgoing and friendly person, but without any other living creatures around you.”

— 18 —

OVER THE NEXT SEVERAL DAYS, Billy was propelled, catapulted, deposited, elevated, dispatched, and plunged into places, activities, predicaments, arguments, contretemps, fiascos, meetings, speeches, classrooms, black holes, picket lines, bars, meteors, barracks, hospitals, galaxies, political rallies, and asteroid belts throughout the universe.

Billy used his coding skills to create avatars for himself and bodyguards while he navigated through parts of the mega-games. Calling his main character Zoomrunner, Billy traversed the realms while capturing audio and video evidence of his misadventures.

“Not this time,” he would say aloud whenever enemy avatars almost took control of the computer. “You like fighting with me?” he shouted at the screen. “Do ya?!?” Typing furiously, Billy created code to battle the algorithms.

Storm clouds of razor wire threatened to engulf his avatar, and Billy created code that gave Zoomrunner extra speed.

Electroshock diamonds exploded out of flower cannons, and Billy quickly created a meteor shield for protection.

Huge metal octopi surrounded the avatar with clanking tentacles and phosphorescent ink.

“Ha!” Billy yelled as he gave Zoomrunner the cloak of invisibility.

It was instantly evident that the attacks were going to continue unabated. “Great,” Billy muttered. “Apparently, invisibility cloaks are misnamed.”

Working furiously, Billy churned out code to create methods to destroy, ward off, or elude all the forces aligned against him. At the end of several hours, Billy was successful, but exhausted. He was able to sleep for a while before being awakened by a sneak attack of the robotic air force of the Hexldstroeffen, the anarchist wing of the Brigade Troopers for the Council of the North.

“You can make up all the stupid names you want,” Billy shouted as he took his place at his improvised computer interface module. “Let me ask you guys one question. Did you ever hear the phrase ‘going nuclear’? Because

I'm about to introduce you to a little thing I like to call the IOP."

Billy accessed all the computing power he could pull out of the realm's grid and launched his counterattack.

"I know, I know," Billy said to the screen. "You're saying, 'What's an IOP?' Thanks for asking. That stands for Interstellar Obliteration Program."

Billy put an index finger on a red hexagonal icon glowing on the screen.

"This is where you go 'bye-bye.'"

Billy tapped the red icon. The screen flashed, the light around him dimmed for several seconds, and then there was silence.

Bliss. Peace. No more attacking forces.

Billy glanced around, noting that everything was cool and calm.

"Okay, then," Billy said. "A break in the action. Cool. So, right now, I'll—"

Thunder, and Billy was in a TV studio, operating one of the hi-def video cameras. He was trying to follow the commands of the floor director, but his headset was cutting in and out, leaving him to decipher such instructions as, "Camera two, give me a—*buzzzzzzzzzz*—shot of

“Everyone will learn about this very soon,” the scientist stated.

“That sounds vaguely threatening.”

“Everything new bothers some people.”

“But this sounds scary,” the host said.

“Not at all,” the guest replied. “Science is giving us ways to optimize the function of muscles, to give people a cardiovascular boost, and improve the body’s utilization of oxygen.”

“That is good news because—”

“In addition, neurotransmitter production and inter-body signaling are going to be augmented, which will lead to greater overall health of the brain.”

“Let’s hope so. You know, it seems—”

“Plus, tech is improving the body’s ability to filter and remove toxins and waste.”

“Really? How does—”

“By optimizing the kidney, the liver, and the lymphatic system.”

“Ah, I see. Well, that’s fascinating. Alright, let’s move on to—”

“We are also isolating and modifying genes to increase efficiency in the body’s digestion and energy consumption,” the guest continued.

“Wow,” the host said. “Okay, so, is there anything else?”

“No, I think that’s about it,” the guest replied.

“And will all these great advancements be available to everyone?” the host asked.

“Everyone who can afford them,” the guest said.

Thunder... and Billy was amidst a poetry slam.

“With your reptiles bleeding rust... And candidates spouting dust... You try to evade the flood... With your jewelry dripping blood...”

Thunder... and Billy found himself at a hoity-toity cocktail party being questioned by an elderly woman guest.

“What is the value to society of a movie star?” the woman asked. Before Billy could answer, the woman continued. “Or a forklift operator, or a company president, or a football player, or a teacher, or a poet, or—?”

Thunder... and Billy was watching an infomercial.

“Have your income tax computed by several different ‘experts’ and compare the

results. Then, come to Taxbusters and get to keep every penny you've earned!"

Thunder... and Billy was at a conference of teachers.

"There is no alternative to a good classroom education. If nothing else, it's perhaps the only contact a child has with a benevolent dictatorship existing within a democracy."

Thunder... and Billy was in an upper degree of reality. A guide who looked a bit like his father was lecturing a group of twelve people. "You may take part in a great variety of sensual experiences by plugging into a selection of stimulation modules, or Stimules."

"Stimulation modules?" one woman asked.

"Sex 'bots."

"Oh. Oh! Does that mean we can—"

Thunder... and Billy was at a discussion of the ultimate viability of earth.

"Consider another world at the same stage of development as earth," one philosopher was saying. "We should ask ourselves how creatures in that world might feel about laws, society, music, religion, labor unrest, alcohol,

divorce, autos, movies, TV, math symbols, disease, regulation, language, tobacco, sex, drugs...?”

“How would they feel about lists?” Billy asked.

Several people chuckled.

“Very humorous, young man,” the man replied. “However, I’m being serious here. Think of another ‘creation of life experiment’ where the inhabitants have designed a society in which equality, truth, justice, fairness, harmony, and peace are realized. Such a place is not known to earthlings, but there are experiments taking place throughout the universe.”

“Yes, I know,” Billy said. “I’ve just seen some of them.”

There was a brief pause, and then a woman in the gathering asked, “Are you on drugs, young man?”

“Lately, I wonder about that all the time,” Billy said.

Thunder, and Billy was gone.

— 19 —

AS THEY ENTERED THE UPPER degrees of reality, Donna and Billy frequently lost control of their positioning. They crisscrossed the realms, each of them popping into scenes, sites, and situations...

Billy found himself giving a lecture to students enrolled in Fundamentals of Machine Language and Numerical Methods (Computer Science Course 10947/25/R, University of North America, Vancouver). Standing at a lectern in an overly air-conditioned auditorium, Billy calmly addressed the six dozen freshmen in attendance while occasionally glancing at the cameras that were beaming him to thousands of students taking the class online.

“Let’s talk about the power of the brain for one moment,” Billy told the undergrads. “Your mind performs its tasks by means of electrical charges that snap and zap and shoot and scoot from one nerve cell to another at speeds that are zippy-quick.” There was a small laugh. “Sorry to use such highly technical terms.”

He was rewarded with a slightly bigger laugh.

“Those electric charges are continuously linking up, bouncing around, and exchanging data through a network of one hundred billion nerve cells packed tightly inside your noggin. Yes, I said one hundred billion. That’s a ‘one’ followed by eleven zeroes. Turns out, everybody has a big brain.” Another small laugh. “Not everyone uses all of theirs.” As before, his follow-up line got a bigger laugh.

“This electrical activity takes place no matter what you’re doing: sipping tea, tying your shoe, making a grocery list, or listening to Wagner.”

The room was rocked by the Tristan chord... and Billy was gone from the room. He found himself watching his sister talk with a reporter about how she had been a participant in an MMA fight.

“As the referee gave us instructions, I looked into the eyes of my opponent and saw confidence,” Donna said. “Once the bout started, she began swinging hard and heavy, trying to bum-rush me back against the cage. I parried and danced, making her miss. Plus,

every time one of her fists or feet went winging past me, I touched her. A calf kick. A jab to her face. A thigh kick. A hook to her head. A body kick. Another jab to her face. More jabs: nose, eyes, jaw, body. At first, her look of confidence was replaced by surprise. Then wariness. Then fear. By late in the second round, it was difficult to see her expressions because she was covered by too much blood. Then, I began hitting her harder. And more often. The fight never made it into the third round. I felt really good about getting the win, and I was even a little sorry that she had to have so many stitches. I woke up in a sweat. But I had soundly defeated all the pillows on my bed. Wait, was that real, or what?”

Thunder... And Donna was gone.

— 20 —

AS BILLY AND DONNA WERE thrust in and out of various degrees of reality, it often seemed to them that meetings with their father were becoming briefer. It was certainly the case that some of their recent encounters were abruptly cut short.

Joseph and Donna met in the 11th degree of reality.

“Dad!”

“Donna!”

“It’s so great to—”

And then Donna was snatched away from the conversation and dispatched to another part of the universe.

Joseph and Billy met in gamers’ heaven, the 7th degree.

“Hi, dad!”

“Hi, son!”

“We should—”

And then Billy was snatched away from the conversation and dispatched to another part of the universe.

Joseph sighed but kept his patience.

Although Donna was able to remain philosophical about having their conversations truncated, Billy was annoyed.

“This is a pain in the ass,” Billy muttered. “Knock off the interruptions! Let me talk with him, damn it!” he shouted to the universe. The universe was unmoved.

Eventually, some of their encounters continued long enough for them to exchange information.

Joseph met his daughter in a meadow full of purple and black flowers that gently rippled in a light breeze. After hugging and murmuring a few words, the conversation turned serious.

“Darling daughter...” he began.

“What?”

“Changes are coming,” Joseph said.

“What sort of changes?”

“Big ones, I’m afraid.”

“Like what?”

“Like a conclusion.”

“What do you mean? What’s coming to an end?”

“Quite a lot,” he said, “although it only affects one tiny corner of the universe. Still...” His voice trailed away.

“Dad? What is it? What’s the matter?”

Joseph turned to regard his daughter. He took a breath and started to speak. “I’m afraid you’re going to have to face some bad news. It seems that nothing...” His voice trailed off. He took a breath and tried again. “I don’t know if anything can be done... if there’s anything that can help—” He left the thought unfinished.

“What?” Donna asked. “*What?!?*”

Joseph seemed to leap back in time, and he repeated his last syllable. “Help.”

With the word echoing in the air, Donna was gone, and Billy had taken her place.

“Dad?” Billy said. “What’s wrong?”

“Not a lot,” Joseph said quietly. “Just everything we once knew.”

“What do you—”

Thunder. This time louder than before. Much louder.

In an instant, Joseph, Donna, and Billy found themselves in the same place. A crowded place. An officious place. An uncomfortable place. A place where doom was in the air.

Evidence

Summary

Verdict



— 21 —

THE PROSECUTOR WAS A ROBOT. The semi-sentient machine was in vaguely human form, and although there were a few awkward moments in terms of movement and balance, it had superb vocal ability. The ‘bot presented the case against humanity with dogged professionalism.

For those watching the trial remotely, there was no mistaking the points that were being made because the ‘bot’s words were translated into every known language.

“Is the prosecution ready for its summary statement?” the judge asked.

“Ready, your honor.”

“Please proceed.”

“Thank you, your honor. This trial has concerned itself with the abhorrent behavior of the inhabitants of a small planet called earth, which is one of eight—or perhaps nine—spheres in what they call the ‘Solar System.’ For the record, the celestial address of this rather insignificant water-covered rock is as follows: Earth, Local Interstellar Cloud of the

Oort Cloud, Local Cavity, Orion Arm, Milky Way, Local Group, Virgo Supercluster, Laniakea Supercluster, and the observable Universe.

“Making things more complicated, earthlings sometimes refer to earth as the world, the globe, Terra, Tellus, Gaia, and Mother Earth, among others. While there are many terms in many humanoid languages, the globule of gravel, grime, waste, and water is better known as the Experiment of Humanity on Planet Earth, or EHOPE.

“Pilot programs like this one are being replicated on hundreds of other stars, planets, and even some of the larger asteroids. Thus far, we have had some promising developments in other locations, including the Centaurus-A galaxy, the Albedo Cluster, and the Andromeda Spiral galaxies. However, there is nothing promising about what has happened on earth.

“Your Honor,” the prosecutor continued, “it is now painfully obvious that EHOPE has largely been an exercise in futility. Over the past decades, it has become evident that the actions of humanity are shameful, lame, rash, lawless, harmful, lamentable, dangerous,

despicable, deceitful, wretched, woebegone, and just plain wrong.”

“The court can do with less litany and more litigation,” the judge instructed the ‘bot.

“Sorry, your honor. I will try to be factual. The prosecution has shown, and the Court has seen, the many ways humanity on earth has repeatedly acted irresponsibly in terms of the planet’s health, well-being, and environment. Time and time and time again, the human race allowed greed, fear, and ignorance to rule their decision-making. Over and over, humanity took basic scientific facts and ignored them, altered them, distorted them, or suppressed them.

“In terms of the planet’s environment alone, humanity’s record is appalling. Gases like carbon dioxide, methane, and nitrous oxide were released into the atmosphere, primarily as the result of burning fossil fuels such as oil, coal, and natural gas. Once these gases entered the troposphere, they trapped more heat, leading to the horrors of climatic change. Not only did these changes adversely affect the lives of current residents of earth, but they also contributed to making new human

lives problematic, and ultimately impossible. The population of earth is literally destroying its own supply of oxygen and water, both of which are necessary for the continuation of life on the planet. Humanity knew all this but refused to act responsibly.

“Your honor, the prosecution has also presented a plethora of evidence displaying other reprehensible acts of commission and omission on the part of humanity, including food insecurity, unchecked urban expansion, governmental instability, gender inequities, lack of financial equality, and such basic human needs as breathable air, drinkable water, and access to healthcare in all forms, preventative and otherwise.

“Humans have also engaged in shocking overconsumption and profligate waste. Their voracious use of the planet’s natural resources has outpaced the sustainable capacity of their ecosystem. Because of their thoughtlessness and greed, earth is facing biodiversity loss, deforestation, habitat destruction for numerous species, rising acidification of the oceans, depletion of the ozone, pollution of their own lungs and bloodstreams, and unchecked waste

of every kind, including island-sized floating dumps of plastic detritus and other refuse.

“Evidence of humanity’s perfidy is plentiful, even from some earth residents. In the nineteen fifties, a publication called *The Nation* noted that nuclear fallout from bomb testing, and ash from the burning of fossil fuel, spread around the globe. Humanity was not alarmed.

“A journalist and environmentalist named Bill McKibben published more than three dozen books and hundreds of speeches and editorials on the subject of climate change. One of his observations was that ‘There is an urgent need to stop subsidizing the fossil fuel industry, dramatically reduce wasted energy, and significantly shift our power supplies from oil, coal, and natural gas to wind, solar, geothermal, and other renewable energy sources.’ Humanity did not listen, and corporations did not act responsibly.

“Greta Thunberg, while still a teen, wrote, ‘We have to understand what the older generation has dealt to us, what mess they have created that we have to clean up and live with.’ She also pointed out that ‘...the climate crisis

has already been solved. We already have all the facts and solutions. All we have to do is to wake up and change.’ But humanity did not wake up; humanity did not change.

“A writer named David Wallace-Wells, in *The Uninhabitable Earth: Life After Warming*, predicted that earth could have 200 million climate refugees by 2050. The toll in human suffering from dehydration, starvation, and disease will be immense, but humanity is not concerned enough to act.

“The Prosecution could cite a plethora of additional examples from such researchers and writers as Elizabeth Kolbert, in *The Sixth Extinction* and *Under a White Sky*, Paul Hawken in *Regeneration: Ending the Climate Crisis in One Generation*, and Naomi Klein in *This Changes Everything: Capitalism versus the Climate*. Many more could be cited.

“Quite apart from actively destroying their own atmosphere, the people of earth did little or nothing to eradicate, or at least alleviate, such human frailties as racism, fascism, greed, willful ignorance, plutocracy, homophobia, misogyny, religiosity, and the descent into oligarchism.

“In their ultimate act of treachery, humanity also did little or nothing to eliminate methods of mass destruction, including nuclear, chemical, and biological weapons.

“Humanity could have worked for decency, light, structure, logic, compassion, truth, justice, and equality, but they chose not to do so. Consequently, there can be only one decision: the laboratory test called EHOPE must be deemed a failure. Human life on the planet called earth will simply succumb to the human-born horrors. The planet will steadily rid itself of the invasive forces and eventually return to its natural state. After that, if deemed worthwhile, a new experiment may begin.

“Therefore, if it pleases the Court, there can be no other conclusion than that the Experiment of Humanity on Planet Earth is an utter and irreputable failure. The proper verdict is clear: Let humanity expire.” The ‘bot turned to the judge and formally nodded. It was almost a bow toward the bench. “Thank you, your honor,” the robot attorney said. “The prosecution rests.”

“Thank you,” the judge intoned. “Normally, the court would adjourn to

consider all of the evidence. However, in this case, that is not going to be required, and this court is ready to render its decision.

“It has been posited that Investigation #3141592 in the Lifeform Evolution Project—also known as Experiment of Humanity on Planet Earth—is of no further use and should be aborted. After hearing all the evidence, the cessation of EHOPE is so ordered.” The judge reached for his electronic gavel. “Court is adjourned.” He motioned with the gavel and a heavy “thunk” rang out through the courtroom.

With that, humanity on earth was no longer of any use to the universe.

Then

Now

Ever



— 22 —

DONNA, BILLY, AND THEIR FATHER wandered in a state of shock for forty days and thirty-nine nights before being able to rejoin each other. They found themselves on a darkened beach in a realm that contained more animals than people. In the distance they could hear the occasional growl, howl, roar, croak, chirp, grunt, or bray.

The three humans were silent for a few moments. The negative verdict still percolated in their minds and weighed on their souls. Donna spoke first. Her voice was quiet, almost soothing.

“Does this have to be the way humanity ends?”

“What way would you like it to end?” her father asked.

“I mean, does it have to end?” she asked.

“Yeah,” Billy said. “Does it? I mean, this is radically raw.”

“Is that a technical term?” Joseph asked.

Billy shook his head. “This verdict deserves an appeal, is what I’m saying.”

“That was the appeal,” Joseph said. “We came in late. Sorry. Time sometimes gets away from all of us. Look, I recognize that this verdict is an emotional shock, but I’m sure you both recognize that it’s intellectually correct.”

The two teens looked at each other, then back at their father. They both wanted to speak. They both remained silent.

“Don’t be so gloomy,” Joseph told them. “Humanity was just one of God’s science experiments. Earth was simply a large Petri dish in which life forms were primed to come into existence, mutate, grow, and evolve.”

“And that’s what occurred,” Billy said.

“It didn’t go particularly well,” Joseph said. “The hope was that this evolution would take humanity from sentience to sapience, but you both know that did not happen.”

“Not yet,” Donna protested.

“Logic, decency, and grace were not embraced by a majority of people,” Joseph said.

“Yeah, but still...” Billy said.

“Putting it a little more politely,” Joseph continued, “the human race did not live up to its potential.”

Billy scowled and nodded. Donna gritted her teeth and nodded.

“The fact is,” Joseph continued, “the research project known as ‘Humanity on Earth’ is a catastrophe.”

“But humans have the ability to change!” Donna protested.

“Do you have any evidence of that?” her father asked quietly.

Donna started to speak, stopped herself, and tried again. “But...” “We could...” “What if...?”

“Can you refute any of the evidence?” her father asked quietly.

Donna looked at her dad with a flash of resentment, but then instantly regretted her emotional reaction. She was angry at not being able to argue convincingly against the verdict.

“It’s scary and more than a little sad,” Joseph said, “but we just have to get used to the end of civilization as we knew it. The experiment of humans on earth is going to be abandoned. It is a failed experiment.”

“Dad...” Donna said in a low tone.

“What?”

“Mom’s down there.”

“Yeah,” Billy added, “and Dwayne. We have to do something.”

“I am afraid that they came along too late to enjoy their fullest lives.”

Joseph watched as his son and daughter regarded each other. They stared with steely-eyed resolve, and it was as if time stopped. Slowly but firmly, each nodded to the other.

“Okay with you?” Donna asked her brother softly.

“I’m good,” Billy replied.

Donna turned to her father and said, “We have to go back.”

“That’s right,” Billy said.

Their father smiled. “And why is that?”

“To get mom and Dwayne,” Donna said.

“They can’t die,” Billy said.

“No one dies,” Joseph reminded them.

“They can’t just become energy,” Billy stated. “Not yet.”

“That’s right,” Donna said. “There’s more we can do.”

“Absolutely,” Billy said.

There was another moment of heavily strained silence as the three of them exchanged glances.

“Congratulations,” their father said with a satisfied smile.

“For what?” Donna asked.

“You have both passed one of the most important tests in this entire ‘assessment of humanity’ experiment that the universe has been conducting.”

“Oh, that,” Billy said. “We do that all the time,” he added with exaggerated modesty. All three of them shared smiles. The smiles faded as the gravity of the situation again weighed on them.

“Mom and Dwayne,” Donna said.

“What about them?” Joseph asked.

“They need to be here,” Donna said.

“How would that happen?”

“We have to go get them.”

“Is that so?”

“Yes,” she said. “And after we do that, we’ll return and find you,” Donna vowed.

“Right,” Billy said, nodding.

Joseph took a deep breath. “I love you,” he told them.

“I love you,” they replied in unison.

“Just remember,” their dad said, “I could always be a few degrees away from you.”

Donna and Billy once again exchanged glances, then turned to regard their father.

“We’ll locate you,” Billy said.

“The journey is the destination,” Donna added. “Whatever happens, at least we’ll all be sharing a place in the universe.”

“Right,” Billy said.

“Okay then,” Joseph told them with pride.

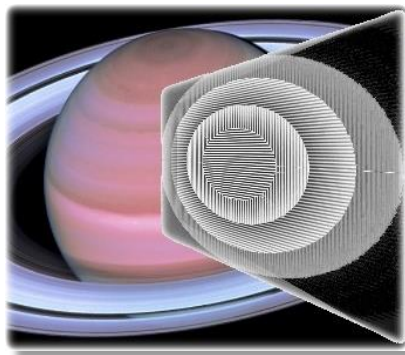
“You ready?” Donna asked her brother.

Billy leaned in toward his sister. He whispered in her ear, “To what degree?”

“To the Nth degree,” she whispered back.

They grinned. They hugged their father. They high fived each other.

And then they were gone.



Author Bio

JOHN SCOTT G is a friendly loner, a relaxed worrier, a rational psychotic, a pragmatic dreamer, a mingling wallflower, a cynical believer, a carefree pessimist, a teller of tall truths, and—worst of all—a mixer of metaphors who often is found shouting a blue streak at a house afire. He lives in an alternative reality called Los Angeles, where he has not yet managed to anger a majority of residents. “I’m working on it,” he claims, “but hey, it’s a big city.”



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