BODY CONSCIOUS

Chapter 2

Chuck Trunks

Everlasting Life

“Bruce, can we have the lights turned off completely?” I asked. Despite overcast skies and a sinking mid-afternoon sun, autumn sunlight scattered off tiny water droplets trapped inside flat and featureless stratus clouds, sending light in every direction like a frosted lightbulb. A bank of southwest-facing windows in the classroom provided enough light for me to easily find my water bottle on top of the wooden stool. A small spotlight illuminated me just as I sat down. The red light on the center camera pulsed in accordance with my heartbeat—slow and steady with a hint of deep satisfaction from knowing what’s to come.

“If you were asked to contemplate the meaning of everlasting life,” I began, “I believe most of you would conjure up images of religious figures, mythical gods, vampires, or, my personal favorite, Peter Pan. If I were granted a *second* wish—my first being today’s global presentation—I’d wish we never stopped being 10 years old. That way, our curiosity would remain intact, we’d still be kind to one another, and we wouldn’t have to backtrack at 50 to ‘find ourselves.’ But I digress. For most of my young life and into early adulthood, the idea of living for eternity seemed as probable as stumbling upon a Willy Wonka everlasting gobstopper. But all that would change in my early 30s after being introduced to the fascinating fields of atomic physics and quantum mechanics. Not only did I learn perpetual motion and never-ending energy were possible, but also that they’re integral to how the universe functions.”

When the screen above Willow’s control panel began to flash repeatedly, creating a short-lived strobe effect not seen since the disco ball went away, I asked Carlos if he’d like to be my assistant during the next phase of the presentation. Once again, he surprised me with his eager willingness. After all, we were broadcasting to all but 13 of the 195 countries around the globe. He wore a white long-sleeve dress shirt buttoned all the way up to his collar. It was neatly tucked into black trousers, making him look like he’d be clocking in at an upscale bodega after he

finished helping me. I fought the urge to order a mojito from the dark-haired fifth-grader, opting instead to direct him to the quantum computer to type in the word ‘random’ in capital letters, followed by a backslash, and ending with the word ‘atom’ in lowercase.

After completing the task, he walked toward where I was sitting and stood beside me. “Do I need to get my dark glasses?” he whispered.

“Oh, no. We’re finished with those,” I whispered back, noticing that he exhibited the same rational thinking as the little professor, Alex.

I stood up and waved off the spotlight in preparation for what was about to happen. I led Carlos to the far side of the H-PAS and watched, along with everyone else, while the undulating light mist reclaimed the flat surface, removing all 58 piles of Mrs. G’s elemental atoms from our view. Immediately, the holographic names of all the elements disappeared as well, turning the H-PAS into a stage whose floor looked like the tops of clouds. Next, a translucent blue sphere the size of an exercise ball materialized and hovered a foot above the H-PAS. It was my cue to explain the unfolding of a true phenomenon.

“Just as I expected,” I began. “I asked Willow to select one random atom for us to observe, and of course, it picked one of Mrs. G’s oxygen atoms—the most abundant elemental atom in the human body. I can already tell it’s an oxygen atom by the bluish tint of the holographic sphere. At this very moment, the quantum computer, with help from advanced AI technology, is preparing to slow down the perpetual motion of the oxygen atom to create a 3-D rendering to reveal its subatomic componentry. Because an atom’s protons, neutrons, and electrons exhibit a property called wave-particle duality that pushes subatomic behavior into a fourth dimension, we’re incapable of seeing this kind of complexity—thus, the need for a 3-D rendering—which *is* a complexity our brains can handle.”

I felt a series of unmistakable yanks on the hem of my sport coat, prompting me to look down at Carlos with a hint of annoyance. “What is it?” I whispered.

“That guy back there is trying to get your attention,” he whispered back.

Bruce was standing next to the side camera, holding his iPad with one arm and repeatedly pretending to throw something with the other. I knew exactly what he was reminding me to say.

“To give you a mental picture of the difference between 3-D and 4-D, imagine throwing a stone into the middle of a still pond in a quiet mountain meadow. You might say to your nerdy quantum physics friend, ‘Look at all the pretty concentric ripples the rock created,’ and then hear them reply, ‘No, the ripples *are* the rock.’”

“That’s crazy!” shouted one of the parents.

“No, *that’s* wave-particle duality,” I replied.

Without warning, the translucent blue ball began to quickly change, ultimately morphing into what could only be described as a model of our solar system, complete with eight BB-sized blips orbiting a stationary bright orb the size of a black olive. The white-colored “planets” moved around the centralized yellow “sun” with the same quickness as daredevils riding motorcycles inside a grated metal sphere at a stunt show. Despite such high speeds in close proximity, they somehow avoided crashing into one another. Now that the stage was set, it was time to direct their attention to the greatest show on earth. Underneath the bravado, I couldn’t help but feel like a huckstering ringmaster as I announced, “I present to you . . . an oxygen atom—the 21st-century’s version of an everlasting gobstopper!”

From Here to Eternity

The oversized 3-D rendering of one of Mrs. G's oxygen atoms not only looked like a mini solar system, but it also created the same kind of glow that a campfire would produce just as the sun dipped beneath the horizon. But instead of an orange-yellow radiance, it was bluish, like the light emitted from a TV screen in a darkened room. Looking down at Carlos, I saw the whole scene reflected in his unblinking brown eyes.

"Let's go over some of the basics," I said to the mesmerized classroom audience. "The bright, olive-sized nucleus contains eight protons and eight neutrons with eight electrons zipping around them. If I took one of each away, you'd be looking at a nitrogen atom; if I removed two of each, a carbon atom would be hovering over the H-PAS. And, if I added 18 of each subatomic component, we'd have an iron atom. Isn't it interesting that the basic difference between elemental atoms is the *number* of protons, neutrons, and electrons and not something more complex? But elegant simplicity isn't the only thing that's amazing about elemental atoms."

"Take a good look at *this* oxygen atom," I continued. "With electrons continuously buzzing around a glowing center, it seems illogical to conclude that the atom is dead. But it isn't alive, either; nor was it ever alive. Amazingly, this oxygen atom, along with all the other nonliving atoms on the H-PAS, made up Mrs. G's body while she was visiting her friends and family this morning. Because this distinction is so crucial, I'll say it again—but much simpler: Mrs. G and everyone listening to me right now are living beings comprised of nonliving building blocks. To add a different perspective, that would be like assembling a squirrel out of Legos on your front lawn and then watching it snatch an acorn and race up a tree. If that isn't mind-blowing, I don't know what is!"

I paused and waited for the audible gasps and frenetic murmuring to die down. Even the children were leaning toward each other and talking in hushed tones.

Bruce seemed to be the only person in the room not gushing over my latest revelation. Instead, he was giving me the rotating finger motion, prompting me to speed things along. I looked down at Carlos, who seemed quite comfortable in front of the cameras, and asked him if he had any idea where the oxygen atom came from.

“From Mrs. G,” he replied.

“Yes, of course, but where do you think it came from originally?”

“I don’t know.”

Two hands shot up, but I chose to call on Amy again, hoping to get back in her good graces.

“Oxygen comes from trees,” she answered matter-of-factly.

“Whoa! It seems we have someone here who knows a thing or two about photosynthesis. Excellent, Amy, but trees and other green plants don’t actually *make* oxygen atoms. Using the power of sunlight, they break down water and carbon dioxide into glucose (a form of sugar), which plants use to grow, and oxygen, which is released into the atmosphere. Believe it or not, the oxygen atom you see floating over the H-PAS was created billions of years ago inside a star through nuclear fusion. When the star finally ran out of fuel and collapsed under its own gravity, it exploded, ejecting all kinds of elemental atoms, like oxygen, into the universe. This particular oxygen atom may have attached itself like a barnacle to a meteorite for five billion years before crashing into Mars. From there, the lonely atom could have bonded with a couple of hydrogens and spent another 500 million years in a Martian sea. Then, due to climate change, the oxygen atom might have been blown hundreds of miles into the red planet’s atmosphere following a massive eruption of a seafloor volcano.”

“Are you still with me?” I asked, hoping everyone was enjoying my geeky version of an epic tale.

“Keep going!” shouted the same baritone voice I recognized from an earlier exchange.

“After hitching a ride on an icy comet headed toward Earth, the little cosmic traveler settled into the jet stream, eventually landing in Ancient Egypt five million years later, where it bonded with calcium, carbon, and other oxygen atoms, becoming part of the polished limestone encasing the Great Pyramid of Giza over 4,000 years ago. Of course, as the limestone aged, it released carbon dioxide gas, sending our intrepid oxygen atom back into the atmosphere. After a thousand years of cycling through every weather pattern imaginable, the little atom, still within its carbon dioxide confines, was finally pushed deep into the earth, underneath a bed of sedimentary rock in Eastern Idaho. As erosion peeled away layers of earth for hundreds of years, exposing the underlying rock, the pocketed carbon dioxide returned to the skies, where the needles of a nearby 100-foot Douglas-fir tree quickly absorbed it. Okay, can anyone tell me what happens next?”

From the last row of desks, I saw a hand waving for attention. It was sticking out of a brown corduroy sleeve. The little professor was checking back in. “Alex, let’s hear it,” I said.

Without being told to do so, nor was it expected of him, Alex slid off his chair and stood next to his desk. In a high-pitched prepubescent voice, he said, “The fir tree made sugar and oxygen from the carbon dioxide and water through that ‘photo process thing’ you told us about.”

“Terrific job, Alex,” I said. “It’s called photosynthesis. But try to remember that the tree uses sunlight to *make* sugar from carbon dioxide and water while

releasing oxygen as a by-product. Don't forget that all the elements you see on the periodic chart—except for really light elemental atoms like hydrogen, helium, and lithium, to some extent—are made inside stars. Okay, so where do you think the story goes from here?"

"I don't know," Alex replied. "Mrs. G breathed in the oxygen?"

"Works for me!" I shouted.

I thanked the little professor for his participation and turned to the audience in front of me. "I imagine Mrs. G as a little girl not quite old enough to start school, making mud pies with her brothers and sisters in the backyard of their family home in Blackfoot. A gentle breeze kicks up from across the adjacent river and serpentines through a grove of mature Douglas-fir trees, carrying with it freshly released oxygen atoms. Mrs. G—better known as Baby Ruth back then—lifts her head to feel the light wind caress her face and blow her wild blonde hair away from her eyes. She takes a deep breath and recognizes the scent of pine cones, totally oblivious to the fact that an almost six-billion-year-old oxygen atom just entered her lungs and quickly made a temporary home within her circulatory system."

"So, it's been with her since she was around four years old?" asked a parent, who immediately threw her hands over her mouth for having interrupted the live broadcast. "Sorry," she added apologetically.

"It's okay," I said. "I actually love the question. The answer is: it isn't likely. We recycle more than 98% of all our atoms from normal biological functions and from what we eat, drink, and breathe within a year of acquiring them. The bottom line is that we literally *rent* these non-living, everlasting Lego pieces for the same amount of time as an annual Amazon Prime or Costco membership."

Litterbug

After a quick nod at Bruce to turn the lights back on, I walked behind the H-PAS, ensuring that the holographic oxygen atom wouldn't be excluded in the frame of the center camera's lens. While gesturing at the translucent blue sphere, I said, "I just offered an epic tale of how this particular oxygen atom found its way to Mrs. G's body, but as you've probably already figured out, there's an infinite number of possibilities. Maybe it didn't hitch a ride on a meteorite or a comet? Maybe it wasn't stuck on a massive Egyptian tomb for a thousand years? Maybe Mrs. G didn't even breathe it in? Instead, the almost six-billion-year-old oxygen atom may have been blown toward Earth 65 million years ago either by an intergalactic wind or an extragalactic cosmic ray, where it attached itself to a grazing velociraptor before being dug up as a fossilized dinosaur bone in 1960. Mrs. G could have simply acquired the atom from a kiss she received from her daughter this morning."

"Now that you're aware," I continued, "that this everlasting oxygen atom was created billions of years ago inside the belly of a massive star that no longer exists and that it's no more alive than the chair you're sitting on, we can move forward and talk about where its story goes from here. But instead of morbidly talking about how *bodies* decompose, I'd rather talk to you about something much more appealing—like a banana *peel*. See what I just did there? But this was no ordinary banana peel because it captured my attention and imagination for almost three months in the summer of 2017."

During an early production meeting with a room full of Comcast and MSNBC executives, there was concern over how I would approach the topic of body decomposition. After all, they understood that Mrs. G's atoms would continue to exist indefinitely—long after her death was broadcast on their lucrative network—and that my presentation would, no doubt, have to account for how

those same atoms would return to the world at large. Understandably, it isn't a very pleasant topic for anyone, especially when it involves the dearly departed.

"I hope you're not planning to talk about rotting corpses," grumbled the silver-haired top dog of the head honchos. He was seated across from me at the other end of a long conference room table in Comcast's opulent headquarters in Philadelphia—a city I called home through high school. "I don't think I have to explain to you why that would be disastrous for business, Dr. Trunks," he added. Within the first few minutes of meeting Brian Roberts in his office that morning, I could tell the CEO of Comcast was a fast learner, open-minded, and not one to miss out on an opportunity. "No, you don't, Mr. Roberts," I replied. "You make perfect sense. That's why I'm planning to talk about a discarded banana peel instead."

"I was late for work one morning," I began while picking up my water bottle and sliding my posterior on the stool. I scanned the room and saw that the parents were as riveted as the students. I secretly hoped they weren't expecting a tale about a magical banana peel. I forged ahead with my story anyway: "So, I grabbed a breakfast bar and a banana from the kitchen before rushing out the door. I parked my truck in the parking garage and began the four-minute walk to the Department of Health and Welfare in downtown Boise. I pulled the banana from my coat pocket, thinking I'd eat the breakfast bar with a cup of coffee once I got settled in my office. Halfway through the banana, I realized my access badge was still in my backpack, forcing me to shove the rest of the banana in my mouth before discarding the peel on the sidewalk. What can I say? I typically don't litter; however, I'm a terrible multitasker."

I upended the water bottle and swallowed what was left, resisting the urge to squash it in my hands like I do at home to conserve space in my recycle bin. I looked at Bruce, who was behind the center camera quietly talking to his two

video technicians. If he wasn't paying attention to me, I knew I wasn't more than a minute off our timetable. For now, I was safe.

"When I walked from the parking garage the following day, I had completely forgotten about the banana peel until I saw it again. It was where I had dropped it the previous morning. Half of it was on the sidewalk; the other was resting on some bark mulch underneath a shrub. It was still yellow, but it was wet from an early morning shower and gooey like you'd expect it to be after 24 hours of exposure. 'I'll pick it up after work,' I told myself. A week or more had passed before I noticed it again. I guess it was easy to miss after turning black. On closer inspection, I noticed it was oozing a substance the color and consistency of phlegm. *Yuck*. Whatever was left of the peel's bright yellow color was long gone. By the end of the first month, when it looked like a failed piece of dry origami, I wondered how the landscape maintenance guys managed to keep overlooking it. But I didn't mind. I was getting an up-close, real-world example of a physics principle known as entropy."

Officer Entropy

"Phyllis," I asked, "do you think time has a direction?"

The little girl tilted her head and gathered her straight blonde hair behind her ear. Her pixie cut and purple T-shirt dress made me think she'd grow up to be a White House correspondent for Fox News. "Yes," she replied.

"And why do you think that?"

Without any hesitation, she answered, "Because we go from young to old."

"That's a terrific answer, Phyllis, and I agree with you," I gushed, "but please show me the direction of time by pointing your finger."

When she paused, I pounced on her logic: “But you said ‘Yes’ when I asked you if time has a direction.”

“Not *that* kind of direction,” she explained. “We get older as the days go by.”

“Wow. I’m impressed. Between you, Amy, Jeremy, Carlos, and Alex, it’s fair to assume the world will be in good hands when the torch is passed on to you kids. Time not only has a direction, but it also has a name; it’s called entropy, and it moves from order to disorder—just like what happens to your bedroom soon after you spend all afternoon straightening it up or to a completed jigsaw puzzle that’s disassembled and put back in the box. And a tossed banana peel is no exception. After another month, half of the crusty husk was gone, with ants and other insects munching on what remained. By the end of the third month, there wasn’t a shred of evidence that could prove a discarded banana peel spent the better part of a summer on that sidewalk.”

I got up from the stool and walked toward Willow’s control panel. After a few keystrokes, the holographic oxygen atom disappeared. I stepped back and watched while the misty white light as thick as a futon mattress slowly retracted from the H-PAS’s tabletop, revealing, once again, the 58 piles of Mrs. G’s elemental atoms.

“You see,” I began, “entropy is essential for the universe’s need for randomness and unpredictability, which ensures the availability of atoms to become a part of whatever might happen on Earth, in our solar system, in our galaxy, or anywhere in the cosmos. I like to imagine entropy as the universe’s traffic cop stationed along a one-way street. He sits in his little cruiser with his tiny radar gun, making sure the flow of *everything* travels in only one direction: from order to disorder. Obviously, his union job would be pretty easy since natural laws prevent anything from going in reverse. As dishwashers, houses, bicycles, people, plants, and whole worlds inch along the entropy highway, their complexities are slowly

reduced to the simplistic, eventually releasing recycled atoms whose attachment-avoidant behavior reminds me of commitment-phobes, who grow antsy when they're in a relationship for too long."

"Now that you understand," I continued, "we are comprised of recycled, non-living atoms that have been a part of countless living and non-living matter over billions of years, and that these same atoms were created inside stars that exploded before our planet was even a twinkle in the universe's eye, you no longer have to guess what's to become of the clothes you're wearing, the TV cameras in this classroom, the chairs you're sitting on, or the trees you see outside the windows. Even the Earth will succumb to the inescapable power of entropy—either after the sun runs out of fuel in five billion years or from our own shortsightedness in 50. But I'm not here to discuss the plight of the human race; I'm here to talk about us—you, me, and Mrs. G."

A sudden rattling noise from the back of the classroom jarred me from my monologue, which had been gaining momentum ever since I started talking about entropy. Bruce's video technicians were wheeling in a Sony 116-inch 4K Ultra HD monitor in preparation for my next segment about the human body. Once the disruption came to an end, I returned my focus to the spellbound children and parents in front of me.

"I don't think it's a surprise to anyone that our lifeless human bodies, whether they're buried in the ground or at sea, or cremated for that matter, are broken down and reabsorbed by the Earth. Who hasn't heard of someone spreading a loved one's ashes around a recently planted sapling so they can stand under it for years to come whenever they feel the need to visit with them? They do it because they believe the tree will naturally absorb some of the ashes, thus making it an extension of someone who's passed away. Everlasting life, if you will. It's a beautiful thought as well as a beautiful image. But it isn't a new one. Even as far back as thousands of years ago, people have understood this concept. In Genesis

3:19—the first book of the Bible—it says, ‘For dust you are, and to dust you will return.’ And if you’ve ever been to a funeral, hearing the phrase ‘ashes to ashes, dust to dust’ is practically a guarantee. So, why would I spend so much time and energy talking about elements, atoms, subatomic particles, and entropy when Sister Mary Agnes of Our Lady of Sorrows already knows what I’m talking about? It’s because the whole dust-to-dust premise is not only true, it’s also supported by sophisticated science that takes the concept to a much higher level.”

I looked over at one of the video techs, signaling that it was okay to begin setting up the nearly 10-foot display monitor in front of the H-PAS. Tim was wearing a Boise State football sweatshirt and an old-fashioned headset like the ones Janet Jackson used to wear on stage in the early 90s—the kind I still wore while driving because my pickup truck is older than Bluetooth technology.

Since I was still holding the empty water bottle, I continued to use it as a makeshift pointer. “We’ve discussed the transient nature of atoms when we’re young like the students in front of me, when we’re old like me, and after we’ve passed away like Mrs. G, but we haven’t talked about how these atoms come together in the first place—like when we first come into the world.”

“You mean like when we’re born?” interrupted Phyllis.

Although parents and students alike weren’t obeying the “wait until you’re called upon” rule, I was open to the new dynamic—especially since the natural interaction made the presentation more relatable to a television audience larger than the one that watched Neil Armstrong take man’s first powdery steps on the moon more than 50 years earlier.

“Oh, no, Phyllis. It happens a lot sooner than that.”

A Ballet of Sorts

"It's only a matter of time," I mumbled as I half-listened to Bruce explain his creative vision for the televised broadcast to the Comcast and MSNBC executives, "before they'd get around to asking about Mrs. G's body after I'd finished with it."

"So, you're telling me that you're going to leave her on the H-PAS for the entire time?" asked the incredulous CEO of Comcast, a company worth almost 100 billion dollars. His question was directed at me and not Bruce. The man responsible for acquiring NBC Universal and starting Peacock abruptly sat up in his chair and said, "We're taking a big chance here. If public opinion goes south on us, AT&T and Spectrum will use that as leverage against us. You're not sitting in a university lecture hall, Dr. Trunks. You're swimming in a shark tank where the first whiff of blood signals a feeding frenzy."

"With all due respect, Mr. Roberts, if public opinion does go south, *I'll* lose my career and credibility. What's the worst thing that can happen to Comcast? Your stock price dips for a few months after you've apologized to America for your insensitivity? Don't tell me you've already forgotten about what Wells Fargo did to their own customers 10 years ago? Wells Fargo's CEO only had to apologize for both the cross-selling and bogus auto insurance scandals during a 2016 Senate hearing, and the company is doing just fine in 2026—up 34%, or 75 billion dollars, since then."

"Who does this guy think he is?" asked a red-faced Mr. Roberts, directing his question at Bruce. "If the money wasn't so tempting, I'd pull the plug on this after-school special right now!"

Bruce glanced at me with an exasperated expression that said, "Let me take it from here." He proceeded to explain to Mr. Roberts and to the rest of the suits that

the H-PAS was incapable of reversing the atomization process and that it would be better to conceal Mrs. G's elemental atoms behind a huge flat screen rather than forcing billions of people to watch us vacuum her up. Of course, I winced at his phrasing, but he was successful in defusing Mr. Robert's growing tirade.

After Tim finished setting up the jumbo monitor in front of the H-PAS, he handed me the remote as he made his way to the rear of the classroom. It looked like your standard remote, but it had been expertly modified, allowing me to control every aspect of the video feed without having to worry about messing anything up. Using various combinations of video, still shots, graphics, and animation, I quickly ran through a PG-rated account of the human fertilization process, emphasizing that a male reproductive cell, known as sperm, fuses with a female reproductive cell, commonly referred to as an egg, combining their genetic material to form a single cell, called a zygote. I pointed out that the single-cell zygote (or fertilized egg) contains the genetic code (or DNA) of a completely unique human being—one unlike *any* of the estimated 120 billion human beings that came before them.

"What's even more amazing," I teased, "is what happens to the zygote as it travels from the fallopian tube to the uterus, a distance of about four or five inches that takes between three and four days to navigate. During that time, the zygote will divide into two cells, then four, then eight, then 16, and finally 32 cells before attaching to the uterine wall as a blastocyst to initiate pregnancy. Somewhere along the line—maybe at the four-cell stage, or perhaps the 16-cell stage—the tiny ball of uniform cells will somehow *decide* which cells will become the embryo and which will become the placenta. Even stranger, after about three weeks, the cells will once again *magically* differentiate themselves, where some will become the brain, heart, or eyes, while others will gravitate toward becoming the skin, bones, or lungs. That in itself isn't very astonishing. But what *is* astonishing is that these early cells are identical to one another—with the exact same copy of the complete genetic code—and yet they somehow are instructed to

translate only a certain section of the code while their neighboring cells are assigned to different parts of the same code."

Stepping toward the first row of desks, I asked, "How big do you think a book would be if it contained the entire genetic code for one human being written across its pages?" Looking for someone new to call upon, I selected an exceptionally diminutive student wearing a brightly colored orange blouse. A trio of metallic bracelets too large for her outstretched arm collected above her elbow and jangled as she waved it from side to side. "Asha," I asked, "what's your guess?"

"It would be the size of a big dictionary," she replied confidently.

"Wow. That's a terrific answer, Asha, because dictionaries are certainly big books. However, you'd need about *800* dictionaries if they were to contain the DNA sequence of just one human being. That comparison alone is truly remarkable, but I'm more enamored with what signals the uniform cells within the blastocyst to start translating different parts of the genetic code. If you're still not blown away by that, I'll explain it in a different way. Let's say I wanted all of you kids to participate in creating a dinosaur out of green construction paper that we could display in front of the classroom. Each of you is handed the entire list of all the different dinosaur parts that would need to be drawn, colored, and cut out. The number of dinosaur parts would equal the number of fifth-graders in this classroom. Next, you'd be asked to select one body part to work on without knowing what any of your classmates chose. Of course, you'd be wondering if they chose the same body part you did. Maybe four kids chose the same eyeball? Maybe nobody chose to make the big spike at the end of the dinosaur's tail? Then, after everyone had completed their work, we'd piece everything together and find that we'd assembled a dinosaur without a single missing part—which means every fifth-grader chose a different body part without having checked with the

rest of the class beforehand. To me, that isn't luck; it's an exquisite microscopic ballet perfectly choreographed against a musical score we can't hear."

Body Conscious

Since I had promised to return the six index cards and their respective blue envelopes to Mrs. G's daughter, Norma, after the presentation, I made sure to collect them from the children after we'd finished with the earlier exercise. Now I was holding the same cards, absently shuffling them in my hands as I repositioned myself atop the wooden stool. In some ways, the stool felt like a safety zone—a place where I could physically fold into myself to collect my thoughts and deliver them with an air of sincerity, humility, and deep conviction. I kept my focus on the children and their parents; otherwise, I'd feel the crush of at least four billion pairs of eyes boring into me.

Years earlier, I had created and honed a rationale that offers an explanation behind the how and why of human existence. In it, I harnessed the power of atomic physics, quantum mechanics, human biology, and genetics—and tempered it with logic and reason. But at the same time, I'm aware that the vast majority of the audience, including most of the parents in this room, won't accept my version of the grand design. After all, who am I to these people? To them, I'm an unrelatable, multi-degreed, intellectual white man without a wife, kids, family, pets, a permanent home, or a regular nine-to-five job, who has the audacity to stand up and proclaim that he can see a fundamental truth about our universe—one that unites and separates the mind-body continuum. But I'm certainly not the first, nor will I be the last, who will be shouted down and marginalized for divergent thinking. Thousands of years ago, Jesus was quoted by Mark in 6:4 as saying, "A prophet is not without honor except in his hometown, among his relatives, and even inside his household." Today, we simply refer to it as "familiarity breeds contempt."

I shifted on my three-legged perch and held up the index cards, saying, “When we were first introduced to the words written on these cards—‘funny,’ ‘compassionate,’ ‘nurturing,’ ‘dependable,’ ‘honest,’ and ‘generous’—I demonstrated that these superior attributes of the late Mrs. G were not only undetectable on the H-PAS but also that they carried no weight or mass, and yet, they were the most memorable aspects of her. As wonderful as these descriptors are, they’re merely a handful of the many quirks and traits that added to Mrs. G’s overall personality; however, personality is an *expression* of consciousness, not the consciousness itself. Let me say it in a different way by revisiting my hidden driver-car analogy.”

“Earlier in the presentation, I said we could see the outside of the vehicle but not the driver due to the car’s tinted windows. Since we can’t see inside, we have no idea what the driver is thinking, feeling, or what they’ll do next. But we *are* able to see how courteous, cautious, law-abiding, and particular they are. Do they let someone in who’s merging? Are they tailgating aggressively? Are they camped in the passing lane with their cruise control set to the posted speed limit? Do they park in Egypt to avoid door dings? Does their car look like it hasn’t seen a sponge in years? Do they lay on the horn if they’re delayed for more than one second? Can you hear bone-jarring bass thumps emanating from their car? I could go on, but I’m sure you get the point by now. Whereas consciousness is a hidden awareness of self, others, and the world at large, personality is the visible product or expression of said consciousness.”

While keeping my train of thought, I hopped off the stool and walked toward the counter with the open water bottles. I grabbed one and quickly took two big swigs. I walked across the front of the classroom, fully aware of the sound of my footsteps, and stopped in front of the side camera.

“Let’s return to our discussion about human fertilization and early development,” I began. “After approximately two months inside the uterus—when human

features start to become recognizable—the embryo is officially referred to as a fetus. Evidence suggests that at this point, the fetus will have also begun showing early signs of sensory processing, signaling the beginning of consciousness. Since the expression of personality traits relies on an underlying consciousness, it's no surprise that core temperaments begin to establish themselves two to three months *after* the onset of self-awareness. Both consciousness and personality will continue to develop well past life in the womb. Once the fetus is born, environments, experiences, interactions, and culture will expand awareness and further characterize personality traits. Although consciousness and personality are distinctly different from one another, they are as intertwined as the human genome's double helix and as interdependent as bumble bees and flowers, forming a feedback loop where our sense of self and understanding of the world (consciousness) directly influences who we are (personality) and vice versa."

I walked back to the stool, but instead of sitting down, I set my water bottle on top of it and continued toward the large screen. It still displayed a detailed diagram of the enigmatic blastocyst I introduced earlier.

"In the first part of the presentation," I continued, "we discussed the separateness of mind and body. In the second part, we've been talking specifically about the body. But before we move on to the mind, let's review what we've learned so far. From what you've heard, you now understand that the human body, although a living, breathing, and thinking entity, is comprised of octillions of non-living atoms that were created billions of years ago inside stars that no longer exist—and that these same atoms have been recycled countless times, making it entirely possible that you might have acquired atoms that were once inside of Julius Caesar, King Tut, a seashell, a dinosaur, or even a neighbor. Within days of our conception, while en route to the uterus, we're amazed at how uniform cells within the blastocyst can precisely organize themselves, preparing for pregnancy and beyond. As cells further differentiate and multiply within the embryo, amassing more and more atoms from the womb, early consciousness arises."

“When I look around this room at all of you, I see people of different ages, genders, and ethnicities in varying shapes and sizes. I see human beings who are both alive and conscious despite being assembled from an infinitesimally tiny Lego set. Throughout the afternoon, I’ve witnessed fleeting facial expressions and subtle behaviors that not only reveal an assortment of personalities sitting before me but also varying levels of self-awareness. Obviously, it’s impossible for me to know what each of you is thinking, feeling, or what you’ll do next. However, I can predict with great certainty what kind of person you are based on how you move through and interact with the world, which means, ultimately, the hidden driver isn’t so hidden.”

The End (of Chapter 2)