



Microhumans

WE ROSE EARLY, HAD COFFEE AND DONUTS IN THE HOTEL lobby, and then checked out. Our meeting with “Dr. Tomato,” as Annie had referred to her, was not until lunchtime. That gave us some time to wander around the city. Eventually, we found the little café, a Middle Eastern restaurant, where I had agreed to meet Dr. Tomasso. Although we were a half hour early, we decided to rest our legs. We found a table by an open window.

“What is this Dr. Tomasso supposed to look like? How will we recognize her?” asked Annie.

“When I talked to her on the phone, she told me she was from India,” I explained, “and has long black hair, dark skin, and would be wearing a red scarf.”

“Well then, that must be her,” she replied, nodding toward the sidewalk outside. A tall, slender woman with a bright red silk scarf paced outside the restaurant.

“Yep, you’re probably right. Maybe she said she’d meet us out in front of this place. I don’t remember now.” Before I had finished my sentence, Annie had pushed back her chair and was headed toward the door. She stepped outside into the warm summer air and approached the lady.

“Dr. Tomasso?” Annie said tentatively.

“Yes?” the doctor spun around, surprised to find Annie beside her.

“I’m Annie Jenkins,” I heard her say. “My husband, Joe, is inside. We have a table. Would you like to join us?”

Annie extended her hand in greeting and Dr. Tomasso took it with a smile.

“Oh yes, of course.” The doctor accompanied Annie into the café and introduced herself to me. I stood to shake her hand.

“Please, sit down! No need to get up!”

“Do you have time for lunch, Dr. Tomasso? We were just thinking about trying some tabouli,” I offered.

“Good choice. It’s the best in Halifax,” she commented. “Actually, I’d love a bite to eat. This is one of my favorite restaurants.”

We all placed our orders over small talk about the city, Dr. Tomasso’s job, the restaurant and pub scene in Halifax, and our families. Soon, heaping bowls of tabouli, fragrant with parsley and lemon, meticulously arranged plates of stuffed grape leaves, and a basket of steaming flat bread were set at the table. We hungrily filled our plates. Although the restaurant was tiny, I noticed a disproportionate number of middle eastern folks eating there; I took it to be a sign that we had indeed been served authentic ethnic food.

I helped myself to another piece of flatbread, and passed it on to Annie. “If you’re from India originally, Dr. Tomasso, what brings you to Halifax?”

“Please call me Cecilia. Actually, Joe, I was raised in Canada, near Toronto. My parents left India when I was only a small child. After I got my master’s degree in chemistry, though, I decided that I wanted to return to India, so I joined the Peace Corps. That’s where I met my husband — in Delhi. He’s Indian, too. After a couple years in the Peace Corps, my husband and I moved back here to Canada. I went back to school, got my medical degree, and we moved to Halifax. I’ve been here about twelve years now.”

“And your husband? What does he do?” Annie scooped up a forkful of tabouli.

“He passed away three years ago. Cancer.” Cecilia ran a finger down the side of her glass, drawing a line in the

condensation on its surface.

“I’m sorry,” Annie said quietly.

“Yes, he was a good man,” Dr. Tomasso straightened up in her seat and turned to me, her eyes barely hiding her sadness. “So, you know Brian Gaulton?”

“We just met him and his wife a few days ago,” I explained, glad to change the subject. “We’re trying to take care of some unfinished business of my aunt’s. Maybe you knew her? Dr. Lucille Boggs from the University of Montana. She passed away recently, too.”

“Boggs is dead? Oh no, I’m sorry to hear that. She and I went way back.” Cecilia paused and looked down at her plate, as if reminiscing. She had a doleful look on her face. “She was a very good friend of mine and a colleague. I hadn’t heard from her in awhile, but that was typical — and with my schedule, I have a hard time keeping up with correspondence, too. I even get behind in my email,” she admitted. “But, I didn’t know she died. How awful! Brian didn’t say anything.”

“Well, frankly I wasn’t close to my aunt at all. I hardly knew her. In fact, I only ever laid eyes on her once and we didn’t even exchange two words then. After she died, her lawyers forwarded a letter she had written to me. The letter was basically a cryptic set of instructions for me to try to complete a project she was working on. Why she picked me is anybody’s guess.” I took a swallow of iced tea.

“I knew about some of Lucy’s research. She was working on a project that many scientists would consider ‘out in left field,’ so to speak,” she commented. “So, you’re a nuclear physicist as well, Mr. Jenkins.”

“Please call me Joe. Heck no, I’m no nuclear physicist. Do I look like a nuclear physicist? I’m a roofing contractor.”

“Then why would Boggs — sorry, but that’s what I called her, and she called me Tomasso, it’s a long story — why would your aunt want you to complete a project for her? Was it a new roof?”

“Ha! If only it could have been that easy. No, it seems

my aunt had a penchant for puzzles. She sent me a very confusing letter with a very skimpy clue, and instructed me to follow it. It has led me to you at this point. Annie has been coming along for the ride. She keeps me out of trouble.” I tapped Annie’s leg under the table with my foot and looked at her out of the corner of my eye with half a wink.

“I don’t understand. What puzzle? What clue?”

“In the letter she wrote, Aunt Lucy said that there was a battle brewing between the ego and the eco, and that the fate of the world was at stake. Sounds rather ominous, don’t you think?” Cecilia just stared at me blankly. “I thought she was a crazy woman from day one,” I continued, “but she left me a rather large chunk of money on the condition I do as she requested. The reason my wife and I are here with you today is because we don’t understand what the hell Lucy wanted from us and we don’t know what we’re doing. I have to wonder if maybe we’re just fools, allowing ourselves to be manipulated by the corpse of a woman who wasn’t playing with a full deck, if you know what I mean.” Cecilia stared at me without responding. “But Professor Gaulton seemed to think that Aunt Lucy was on the trail of something important. He suggested we stop and see you before we go back to Pennsylvania. Can you tell me why he would make that recommendation?”

“Probably because I knew your aunt quite well. She certainly did have a ‘full deck,’ by the way. We were undergrads together in Toronto many years ago. After college, we’d see each other maybe once every two years or so, but lately we kept in touch by email. She never married, you know. Never had children.” Cecilia slowly shook her head. “I can’t believe she’s dead.”

“When was the last time you saw her?” I asked.

“About four months ago. She was up in Toronto on business and I was there visiting my family. We got together and had dinner. She was really excited about a theory she was working on at that time. It had nothing to do with

nuclear physics, which wasn't unusual for her. She had a lot of other interests. She indicated that she was intending to work with a team of scientists around the world on this new theory, but she had to put some finishing touches on it first."

"What theory?"

"Actually, it was rather intriguing. She said that nuclear physicists sometimes imagine the universe as a macrocosm and atoms as a microcosm, both domains ruled by essentially the same forces. The forces of electricity, gravity, and magnetism among the planets and stars are like the forces among electrons, protons, and neutrons. She referred to such viewpoints as 'quantum levels of perspective.'"

"Quantum levels of perspective?" Annie repeated.

"Yes. She said that if you look at something from the next quantum level of perspective, you can see it in an entirely new manner. She thought that was why scientists have so much trouble understanding the 'whole picture,' as she called it. They don't know how to adjust their perspective. It's the ones who can look at things in new ways that make the exciting new discoveries. If you were to look at solar systems from the next quantum level *up*, for example, celestial bodies might appear as atoms. Understand?"

"I think so. And if you were to look at atoms from the next quantum level *down*, they might appear as celestial bodies. Right?"

"Exactly. You got it."

"But I don't see where you're going with this," Annie replied.

"Well, Boggs thought we could look at biological systems from other quantum levels of perspective, too," Tomasso answered.

"In what way?" I asked.

"She said that if you view the Earth from a distance, say from outer space, which would be the next quantum level up, then the planet appears to be a single, relatively tiny organism, and all of the life forms on the earth appear

to be microorganisms.”

“Yes? And?”

“Well, she was intrigued with the idea that the human species could legitimately be considered microorganisms when viewed from this scale.”

“We’re microorganisms now, according to Lucy?”

“Yes, it sounds crazy at first. She said that people would tend to immediately discount this idea because of their egos. No person wants to admit that they’re as insignificant as a germ in the overall scheme of things.”

“Ego? That’s the first time we’ve heard that word used by anyone so far. It’s one that Lucy used in the letter she sent to Joe,” Annie added.

“Well, yes. According to Boggs, the ego is the sense of the human ‘self’; it acts as a barrier between humans and the rest of nature. Having an ego is a natural thing, but it can cause people to feel unduly separate and removed from the greater scheme of things, from the natural world around them. Anyway, Boggs insisted that I meet with her in Toronto to discuss this. She said she needed to run it all past me since I’m a pathologist. She was very excited about it.”

“Why you? Why a pathologist?”

“Well, if you think about it, it does make sense. If, in fact, the human species can legitimately be viewed as microorganisms, then where would you go to find out about the behavioral patterns of the species?”

“To a microbiologist?”

“Exactly. Boggs thought that someone who was an expert on microorganisms could give her some clues about the behavior of the human race. She said that humans were relating to the Earth as microorganisms relate to a host organism. She was concerned because this perspective was not being noticed by the scientists of the world, who instead insist on seeing human behavior only in the context of large mammals, not as microorganisms.”

“It does sound kinda crazy. Human microorganisms.”

“It sounds crazy when examining human behavior in

relation to the other *life forms* on this planet. Humans don't relate to cows, for example, like microorganisms do. But it doesn't sound crazy at all when considering human behavior in relation to the planet as a *whole*."

"So, you're a microbiologist and Lucy thought you could give her some insight on all this? Is that what we're supposed to understand here?" I asked.

"Not exactly. It gets better. Or maybe I should say it gets worse."

"In what way?"

"I'm not a microbiologist. I'm a pathologist," she clarified.

"Meaning?"

"Meaning she's an expert on disease, Einstein," Annie so kindly offered.

"Yes, that's right. I study microorganisms of a particular type. The ones that cause disease."

My face must have looked completely blank.

"He's slow. Don't mind him. Give him a few hours. Have some more iced tea, dear," she said, patting my hand. "Maybe you can get another brain cell to start up."

"Ha! Your husband is smarter than that, I'm sure, Annie."

"Yeah. I'm not as dumb as I look!" I declared. "But what were you saying?"

"No one's that dumb, dear."

Cecilia shook her head and chuckled, amused with our bantering. "How long have you two been married?"

"Well, it *seems* a *lot* longer than it actually is," I earnestly replied.

"Thanks a lot! Twelve years. If we make it to twenty, I get a medal," Annie insisted.

"Let's get back to our original point of discussion," Cecilia said, laughing. "I have to get back to the clinic and I don't have much more time. Is there anything else you want to know about Boggs?"

"Yes," I said. "What were you just saying about diseases before we were so rudely interrupted?"

“Your aunt practically interrogated me about disease-causing microorganisms. We call them pathogens. The more information I gave her, the more startled and disconcerted she became. I explained to her that pathogens can often dwell within their host without causing harm and that, for example, we all probably have some disease-causing microorganisms in us — or on us — right now. Our system of antibodies keeps their population low enough that we never show any disease symptoms.” Cecilia folded her arms on the table and leaned toward us, explaining, “When the population of pathogens rises to a certain level, though, they begin to suck the vitality out of their host, consuming and multiplying to such an extent that it taxes the host to a perilous degree. Pathogens seem to have no genetic ability for symbiosis. They don’t *want* to live in harmony with their host organism. If anything, they act like they want to *kill* it. They secrete enough toxic waste to poison their host. If they keep multiplying without being checked, their host gets sick and dies.”

“So it was Lucy’s idea that people are like disease-organisms on the Earth. Isn’t that right?” asked Annie.

“Exactly. Whenever I described a particular behavior of a pathogen to Lucy, she translated that behavior to her next quantum level of perspective. She said the behavior of the human species in relation to the Earth parallels the behavior of a pathogen in relation to a host organism. She said that humans dwelled on the planet for eons and never did much perceivable long-term damage. Then they multiplied to a certain population level and their toxic discharges began harming the planet. Just like disease-organisms, humans began consuming and multiplying and polluting, showing little regard for their host. Since this is the typical behavior of pathogens, Lucy wondered if the human species was, in fact, a planetary disease. I know she did a lot of soul-searching, trying to figure out if that is our destiny as a species, or if it is a choice for us to make. She thought that if it was a choice, then people needed to know what was going on before it was too late to change any-

thing. Before we reached the point of no return, as she called it. People needed to know what we were doing, collectively, as a species, before the disease became incurable.”

“She thought the human species was a sort of pathogen, then?” I asked.

“Actually, no. Let me clarify that. She thought that *some* human *cultures* were exhibiting pathogenic behavior, but not the species as a whole. In fact, she made it very clear that some human cultures appeared to be able to live quite harmoniously with our planet and its ecosystems. Most indigenous cultures, for example, have lived for millennia in a sustainable manner. It’s the *American* culture in particular, and others with similar economic systems, such as Japan, that she was worried about. She was also concerned that China would be next to become obsessed with an environmentally destructive form of material consumption. If that happens, she said, we’d be in a very sorry state of affairs.”

“Do you think we’ll kill the Earth?” Annie said quietly.

“According to Boggs, our disease-like behavior will either kill the Earth, or maybe just make it sick enough that many of the more vulnerable life forms on it will die, or, and this is one of her theories that seemed a bit dire, the Earth will kill us in its own defense.”

“What?! How would it do that?”

“Well, pathogens don’t exist in a vacuum,” Cecilia patiently explained. “Lucy really grilled me on this issue. Wherever there are disease organisms, there are things that fight the disease in defense of the host. I explained to Boggs that when a person gets sick, the body temperature rises as a defense mechanism against the disease. People think that diseases cause fevers, but the body boosts its *own* temperature in response to a disease.”

“Why?”

“Because, when the body’s temperature is higher, it can generate many, many more antibodies, T-cells, and the like. It needs these things in order to fight the disease.”

Boggs said that the Earth's temperature is beginning to rise now, and that it's rising at an unprecedented rate. Skyrocketing, in fact. From the next quantum level of perspective, it looks like the Earth is getting a fever. Your aunt suspected that the warmer global climate might allow the proliferation of organisms that would make life miserable for humans, and maybe even exterminate us."

"What kind of organisms?" I asked.

"A very simple example would be mosquitoes. Mosquitoes have killed more people than all wars combined. A warmer planet would mean a vastly expanded range for disease-carrying mosquitoes. And that's just a simple example. We actually have no idea what new, mutated, or evolving life forms, viruses, or bacteria may be sparked into existence by a warmer planet," she folded her napkin in her lap. "This is my own personal area of interest. You know in the past fifty years, at least fifty new human diseases have emerged?" She began listing them, ticking them off on her fingers. "Ebola. AIDS. Hantaviruses. Lyme's Disease. Pretty scary stuff."

"Let me see if I can get this all straight," I said. "It was Aunt Lucy's theory that some human cultures may be exhibiting the behavior of pathogens in relation to the planet as a whole."

"Precisely."

"And that we're behaving in such a manner without realizing it," I continued.

"That's correct."

"But if we realize it, we may be able to change our behavior so that we're no longer a disease."

"If it's not too late," added Cecilia.

"And if we don't," added Annie, "the you-know-what will hit the fan."

"According to Boggs, my friends, it's already hitting the fan. I think that may be what she meant when she said the fate of the world may be at stake."

"But Lucy also said a battle was brewing between the ego and the eco," I interjected. "What did she mean by

that?”

“Well, if I may hazard a wild guess, I’d say that, to Lucy, the ego is what blinds humans to the destruction they’re inflicting on their host planet. The ego is what allows the individual human to feel more important than anything else on the Earth, or in the universe, for that matter.”

“And the ego is pumped up by things like material wealth and social status,” remarked Annie. We turned to each other, then stated in unison, “The robbing frenzy!”

“What’s that?” Cecilia looked at us in confusion.

“It’s a long story, Cecilia. Another of Lucy’s grand theories,” I explained. “Lucy seemed to think that we’re in a sort of robbing frenzy, stealing all of our planet’s natural resources. Like alcoholics, we’re in denial that we have a problem with consumption.”

“She’s probably right about that. It wouldn’t surprise me at all. But Lucy did have some questionable ideas, I must warn you. I did have some doubts about her.”

“Oh? What, specifically, do you mean?” Annie asked, glancing at me out of the corner of her eye.

“She was a bit paranoid. She thought that if she could identify the roots of our disease behavior and make that information public, to try to change our course on this planet from...”

“From destructive parasite to symbiotic organism,” I interrupted.

“Yes.” Cecilia smiled gracefully and continued.

“Anyway, she was sure that if she tried to make this information public, the powers that are benefitting the most from our destructive behavior would try to stop her. Maybe even kill her.”

“You’re kidding, right? Who would’ve wanted to kill Lucy?”

“She said that a few people were making a lot of money at the expense of the environment. She believed that their egos had become so utterly bloated and pathogenic that they would stop at nothing to prevent anyone

from getting in their way. She told me that sometimes she had a feeling she was being followed. She was afraid that her phone was tapped. She was afraid for her life. She confided in me about these fears of hers, and she made me promise that I'd tell no one. She even stated with tears in her eyes that she didn't know if she would ever see me again. Now that she's dead, I feel it's important for you to have this information. It's possible she may have been delusional, but how *did* she die?"

"I'm not sure how she died, actually," I said. "I thought that maybe it was from a heart attack, because I saw blood pressure pills on the desk in her house."

"Maybe you should get a copy of her death certificate. Even an autopsy report. Tell you what, I'll look into that for you. I may be able to get that information easier than you can. Give me your address and phone number and if I find out anything, I'll call or send the information to you."

"Now just hold on a minute," I said, feigning seriousness. "How do I know you're not a spy?"

"You have to trust me, Joe. Who else are you going to trust?"

I handed Cecilia one of my business cards. "It's all there, Cecilia. Thanks for doing this. We need all the help we can get."

"I think so."

"See dear, she's got you pegged already."

"I'm late for work. It was a real pleasure meeting you two. If you're ever in Halifax again, please do look me up. And do keep in touch." Cecilia stood up to leave. "You'll be hearing from me."

"The pleasure was all mine, Cecilia," I said as I stood to shake her hand.

Annie and I remained in the restaurant a while longer, finishing our lunch and discussing the salient points of our discussions with Dr. Tomasso and Professor Gaulton. If the Sisters and their crystal had been correct, which was a giant leap of faith in the first place, as far as I was concerned, and we had been steered in the right direction, we

had now, presumably, come to the right place with regard to my aunt. Apparently, Aunt Lucy had been on the trail of a theory about humans inadvertently damaging our planet, perhaps irreversibly. She had somehow been able to imagine humans as microorganisms on Earth, and had seen that we were treating the planet like a disease organism treats its host. She seemed to believe that humans were unknowingly and psychologically locked in the grip of a consumption frenzy, one that could have disastrous results. It all sounded incredible and a lot like doomsday. We didn't know *what* to think. What did this have to do with *us*? What were we supposed to do next? The fact that our knowledge of this was based almost entirely on a group of witches and their magical stones left us extremely skeptical. We both decided there was only one sure thing for us to do now: get to the airport, catch our flight, go home, and worry about it all later. Little did we know that we had set foot on a very slippery slope, and whether we wanted to or not, there was no turning back.