

## The Patients of Job

Roger and Tommy watched the home run derby with some interest, laughing joyously as the field narrowed. And then it was the day of the game. Margie, Maria, and Roger were all hyped as Tommy entered the breakfast nook, still sleepy. "Did you sleep alright?" they asked in unison.

"Like a baby." He responded. "Never slept better in my life."

Their breakfast was fun with no tension whatsoever; one could not have told that Tommy was stepping out on the biggest stage of his life. Those who knew and loved him best were not in the least nervous about anything that might befall Tommy to keep him from the stardom he had already achieved. They waved him off and before long proceeded themselves to pick up Lisa and Julie who met them at Julie's condo. They were early to the stadium so that the cameras located them from the start of the national broadcast, integrating them into the coverage of the event. They discussed Ray's amazing achievements of so long ago and Roger's of more recent memory. Three generations of outstanding ball players. And they covered the tragedies that, in addition to outstanding achievement, had seemed to accompany the Bonn family, the irregular romances of three generations, and the current pregnancy status of Margie and Maria. They explained also the intricacies of how the other two ladies were related to the principals. Obviously, in addition to the other starters they focused on Tommy's outstanding achievements by mid-season. Then the National Anthem was sung and the inimitable umpire's yell of 'play ball!'

Tommy had shut out the American League all-stars in the first inning and had gotten two quick outs in the second inning which would surely be his last, when Thomas Mancini, who was having a phenomenal year with 25 home runs in the American League already, came to the plate. Tommy had become a master at keeping batters from hitting the ball in the air. On the first pitch to Thomas, Tommy threw a one hundred and one mile an hour fastball to the outside of the plate. Mancini hit it hard up the middle – right at Tommy. It hit him just above the cheek bone on the right side of his face, smashing into his temple. It would have been hard to imagine surviving such a blow. Ultimately, he wouldn't. An ambulance was on the field within a minute, EMT's busy attempting to save him but to no avail.

But that was only the beginning of a cascade of catastrophic events. At the instant the ball had struck Tommy and the loud gasp arose as though the arena was a single gaping mouth but before the ensuing silence, Margie had bounded up with hands to her face terrified. She tripped on the stair out of their box and tumbled all the way down the complete flight headfirst. Her crumpled and bleeding body lay lifeless at the bottom; she was unconscious. Everyone around them screamed and kept screaming even as ushers filed in and another crew of EMT's crowded into the stairwell.

Roger and Maria were both remonstrating that her baby was at risk as well as Margie. It was amazing how quickly that they had her on a stretcher and were heading into the opening onto the concourse at that level. Maria and Roger ran along beside them and into the ambulance while security forced the crowd of onlookers away. Once in the crowded ambulance Roger could tell from the activities of the EMTs that Margie had died. His mind shifted gears quickly.

"Her baby!" he yelled. "Save the baby."

Maria was still down bending over Margie, speaking to her even though she too realized Margie was probably gone. She jerked her head around when she heard Roger's exclamation. "Roger!" she said, sobbing. "Roger, Margie's gone."

“I know,” was all he could say, putting his arm around Maria to help her rise to a standing position where they embraced tearfully, swaying until they sat back down at the insistence of an EMT worker when the ambulance swerved as it rushed along, its siren blaring.

Upon arrival at the emergency entry to the hospital, activities intensified; the ambulance staff wheeled Margie out into emergency care. Doctors immediately surrounded her and rushed her into surgery. Convinced that they were concentrating on saving the baby, after a few moments of standing awkwardly Roger inquired at the main desk about Tommy. They pointed him to the ICU where Roger rushed, leaving Maria in a waiting room. A doctor came out to explain that Tommy was in extremely critical condition; they were afraid he probably could not survive the surgery that had to be done to afford him any chance of survival at all. The ball had shattered his skull and forced bone fragments and associated profuse bleeding into vital areas of the right side of his brain. They would keep Roger apprised of the situation.

He returned to the waiting room to wait with Maria. Lisa had arrived with her calming influence.

“How did you get here so soon?”

“You tossed me the keys when you went off with the EMTs,” Lisa said. “I didn’t catch them by the way, but I scrambled around, and someone helped me find them.”

“You are heroic,” Maria noted nervously. All these comments might have been humorous or cute at any other time, but no one did more than smile sympathetically.

Then after Roger sat down emotionally exhausted and relayed the dire news about Tommy’s condition, he asked whether they had heard any information yet about Margie or her baby. No, they hadn’t, but shortly a doctor entered to inform them that the baby had been saved and she seemed completely healthy. She!

Maria was sobbing with Lisa comforting her and then suddenly another major difficulty presented itself. Maria began moaning in pain; her contractions had not only begun but were continual.

“Oh God,” Roger muttered as he rushed to the receptionist for assistance with this new crisis. The same doctor who had announced Margie and Tommy’s baby came rushing along with nurses and a wheelchair just as Maria’s water broke. She was whisked away and down the hall to a ‘birthing suite’ in the maternity section with Roger holding her hand through the entire trip. What might usually have been a lower intensity chat during such a process to relax the expectant mother was instead a horrified silence with intermittent painful comment during each intensified contraction.

‘Only child twins’, ‘only child twins’, ‘only child twins’ – reverberated like drumbeats between his temples.”

Indeed, two baby girls were born this day.

How does a story like this end? If this were a novel, the author would not know. These things happen; they are not written in DNA or in some plan laid out by an omniscient being, but they happen. It is not as if an author without empathy for his fictional characters comes to a place like this and forgets his plan. There is no plan for things like this. They happen and when they do, any possible plan is destroyed as an integral part of the disaster. The appropriate question becomes, not how does this story end, but rather how can this story continue? It is like a mathematical function of  $r$  with a singularity at location  $r_0$ . The function makes sense right up to where one gets to  $r_0$  from any direction. It’s even okay at an interval away from  $r_0$ , however small; the function makes sense everywhere but  $r_0$ . But at  $r_0$  it makes no sense at all; it cannot be

fathomed. The pencil or stylus can go no further. But the function still exists on the other side of  $r_0$  – if one is even interested in the function beyond that point any longer... if one could somehow get there.

Despite its usual cataclysmic interruptions, life does go on after swerving out of its normal course. Well... for those for whom the bell has not yet tolled... life goes on and sadly we are they for whom it does. Not immediately, but after a lapse of time.

Lily and Eileen thrived as the newest generation of only child twins – more as sisters than any sisters ever had. Their parents thrived as well, although very differently than they had thrived before. Now, years past when other things had ceased to matter, the girls had begun school just yesterday. Routines would change in a somewhat less dramatic sense, but changes would accrue. Although the dedication of Maria and Roger's lives to the well-being and education of their girls was now immutable, still with their absence during designated hours in school, an adjustment would be inevitable.

Roger sat looking out over the reservoir, merely staring without immediate comprehension.

"Julie retires today, remember?" It was Maria breaking the silence.

"Yeah. Yeah, I do recall that she was. Today huh?"

"Yes. I just heard from her; she's sold her condo."

After too long, Roger responded. "What's she going to do?"

"She's coming up to visit."

"Oh. When."

"Right away. She wants to check out those new condos north of town."

"That huge monstrosity overlooking the reservoir?"

"I wish you'd call it a lake like everyone else; that dam went in long before you were born. And they're condominiums. But yes, she's going to check them out."

"Why?"

"She likes us; we're friends; we used to be close."

"Aren't we close now? She shows up for vacations every year."

"Yes, I know – most years. We are still close, but don't you remember how we used to get so excited about merging electrostatics and gravitation and arguing about your three-down-quark electron."

"Nobody cares about any of that now."

"No one ever cared about it but us, but that's the point – we did."

"Yeah. Well... we never addressed the q factor."

"The 'q factor'?" Do you remember our last discussion on that topic?"

"No. We never discussed the q factor. Anyway, it's over."

"Julie misses it. Being Dean had never been what she had wanted of her career. She'd like to see whether we can get it going again. What's with you and the q factor anyway? We addressed the higher level; we avoided spin initially."

Roger continued staring out across the reservoir but thinking now. "Well maybe it can't be addressed top down. We assumed spherical symmetry; spin isn't spherically symmetric."

"You've given up. Is that it? Do you remember our last discussion all those years ago now concerning the relationship between variances of the gravitational and electric charge distributions?"

“Yeah. Whether or not the gravitational variance was down at the Planck distance or the same as the electrostatic variance at the nuclear level.”

“You said there had to be a logical reason for all aspects of physical laws so I told you that you would have to come up with the logical rationale for one or the other.”

He chuckled cynically. “Yeah. I remember that but some things don’t make sense.”

“Well, do you remember my contribution to that discussion?”

“Yeah. You suggested that there was no apparent reason why it couldn’t be an intermediate value just less than the electrostatic variance.”

“Yes. I’ve thought about that some off and on.”

“Have you?” He paused. “Was that while you were changing diapers or later while you were teaching the girls Italian?”

Ignoring his off-topic distraction, she answered, “No. More recently – in interacting with Julie on why she is so anxious to not be dean anymore.”

“Does the physics we were working on really matter to you... or her?”

“Yes, of course it does Roger. Doesn’t it matter to you.”

“No. Not like it did. I played baseball till I was tired of it and then I started getting into physics again, and then... well, with Tommy doing so well I started getting interested in baseball again... and then... life stopped... and has barely started up again all these years later.”

“Ellie, Margie, and Tommy died,” she blurted out angrily and then she sat and watched him for a few moments. “We have to learn how to say it, Roger.”

He turned his stare from out over the reservoir to lock onto her eyes.

“All those awful things actually happened Roger and we have to quit covering them with ellipses. They have names Roger: Your parents, Julie Davidson, Ellie, Jamie, Judy, Tommy, Margie, Lisa... the list will never stop Roger. It didn’t start there, and it won’t stop here.” She halted abruptly then, teary-eyed. “And would you please call it a lake Roger? Just for me! It’s a lake, okay.”

“Yeah, okay. I can do that much.”

“I want more than that. You don’t write obituaries for a living and you’re not a ballplayer either; you just hit home runs for a living for a while. Okay? You’re a physicist. I’m a physicist. We don’t have to say we *were* physicists, Roger,” she virtually screamed. “We are *fucking* physicists, okay? *Not* historians – we don’t write obituaries and no more morbid memories – not anymore. We have two happy girls, and we need to be happy for – and with – them. Okay? Now we go back to what we know how to do – what we did. Julie will help us do that – to get us over it and restarted. Okay?”

“Yeah, okay. I guess that’s a pretty good description of who we are and aren’t.” He grinned like he hadn’t in way too long, moved by her passion. “So I guess we should reestablish whether we are indeed physicists before we start defining what kind of physicists we are since the girls will be home before long and we don’t use the f-word around them.”

“Yes,” she said, smiling now as well. “So what’s the logical relationship between the variances of electrostatic and gravitational distributions? That’s what I’m asking.”

“It was your idea with which I happened to agree, so I guess the gravitational variance would have to be sufficiently small to lock two identical distributions from fragmentation but not so small that it locks disparate distributions so tightly that it precludes any further necessary recombination.”

“Roger, I love you.”

“Good. Maybe that’s a better adjective. Maybe we could just be ‘loving’ physicists. Would that work?”

“It works great.” She sort of smirked at him then. “So, you did think about it some during these busy years between diapers, didn’t you? You thought about how your cute little-u up and little-d down quark could adhere until a second down quark joined the mix to form a ‘d-u-d’ neutron, didn’t you?”

“Yeah, I guess I must have. Are you wanting to secure our position before Julie gets here so we can stick together – adhere, I guess we could call it – when the other ‘d’ gets here.”

“No. I’m not worried about Julie as a ‘d’. I just thought it would be nice if we could familiarize ourselves with what we had going before. I found those old files in our database the other day. It was fun looking at them. Come over here and look at this figure we discussed last time we talked with Julie.”

Roger came over and pulled up a stool to sit next to her at the drawing table. As he inspected the diagram of the electrostatic and alternative gravitational forces on log scales, Maria pointed to where their second alternative would have to be modified to produce the overlapping of force curves. “It doesn’t have to be very much,” she said. Maybe if the gravitational potential is added to the electrostatic self-energy, that might be enough ... without even modifying that alternative.” She paused and then appended, “Maybe that’s the logical reason for combining electricity and gravitation.” Laughing now, she said “Isn’t that so Professor Pangloss?”

“You make everything make sense for me...” he laughed with her but added cynically, “in this best of all possible worlds.”

“Well... thinking about this stuff again, there’s something that doesn’t make sense to me.”

“Oh yeah, what?”

“We were thinking that electric and gravitational charge could be added directly, right?”

“Yeah. I think that’s where we were at.”

“Well... potential is not energy without multiplying it times a charge, whether a unit test or an actual charge. The same goes for the field strength; it’s not a force until it’s multiplied times a charge.”

“Oh,” he uttered and paused. “Yeah. So what about the cross products in those constructs? Is that what you’re wondering about?”

“Yes. We never addressed them, and I don’t see a role for them. So, I’m thinking that it must require the product of a charge and its complex conjugate and not just the square. Right?”

“Yeah. You’re right, a complex value. So which one is imaginary, and which one is real?” He paused. “Oh, I guess the lesser must be imaginary, so the gravitational charge.”

“Let’s look at that effect for a down quark,” she responded as she opened a plotting window and put in the programmed formulations for the self-energy of a down quark. “There. Look at that.”

“Yeah, The button on the Lego, right?”

“Right. The latching logic behind the indivisibility of fundamental particles.”

Seeming appropriately elated, but still withdrawn, he paused long enough that Maria looked over at him as he stared across the lake and then he said, “Did you ever think about dropping the spherical constraint on the Poisson equation? And can a fixed distribution be rotating without effect? It would have a magnetic dipole, right? Spin. But would that change the distribution?”

Maria had started to remonstrate when the girls came running in all excited and out talking each other about the fun they had had at their first day of school. Lilly teased Eileen about a boyfriend with Eileen retaliating, “You missed that easy word in the spelling bee.” The family

was the entire world again engulfing its separate parts, subsuming all its necessary accoutrements including the born-again physicists.

It was still light out as Roger kissed Lily and Eileen good night. Maria had put them to bed only shortly before, their propellant having run out; they were already fast asleep. It was a beautiful evening as he looked out at the distant hills and mountain reflected by the water, so he stepped out the back door and on through the water gate of their enclosed yard that opened onto the path that continued many miles on up along the rim of Lake Cascadia. It had just become Lake Cascadia for him as it had been for everyone else for years. The name gave it a different reality for him this evening; 'reservoir' has a completely different meaning, a different feel. He passed some strollers giving the nod of the head and flick of the finger as he proceeded north, thinking as he strolled of all his life had been, had become, and was becoming. These were not melancholy thoughts about the world line he crept along through spacetime that had been delineated by events, many sad, some joyous, all of them the meaning of what it is to still proceed through time. Alive, with intersecting world lines aimed into the future, two brilliant girls whose unlimited potential was all ahead of them.

His thoughts reverted like the music from a scratched phonograph record from long before Roger was born but which he had heard about. They involved hospital sounds of when those two girls had been born minutes apart, one normally (if anything about that situation could have been considered normal), the other ripped from her dead mother – his much younger sister (if that was what she had been), married to his and Ellie's son Tommy. Roger felt himself twitch but bore onward. He had been there as one came through the birth canal, amazed by the entire process and at the long black hair on the infant. After things seemed stabilized in that delivery room, Roger had gone back out to the waiting room to where Lisa was holding a swaddled baby girl with virtually no hair except pale wisps; a nurse and Julie had looked on. He had sat down on one of the soft chairs in the waiting room and Julie had come over and placed her arm around his shoulder.

His thoughts would proceed no further down that path. He walked on, jogging by when he approached others on the trail. After another half mile or so, his mind became unstuck. It was with memories of Lisa returning with them to Canyon Creek. She had stayed on, helping with the babies until her cancer had returned and she had had to get back to the Bay area for doctoring, her daughter Elizabeth coming to care for her until her death. It was another huge hole in their lives, the girls learning to feel the sting of death firsthand. He had stopped walking now and stepped off the trail looking across the narrower part of the lake – the 'lake'. Yeah... it's a lake.

A lady he had seen at meetings dealing with the school curriculum spoke to him as he was standing there unaware of his immediate surroundings.

"It's pretty on evenings like this, isn't it?"

"Oh, hi. Yeah, it is." He fell into step walking with her back toward home.

You and Maria did a good thing getting this school thing going. We needed a top-class school up here. The credentials of the principal and every one of the teachers is amazing – especially for way up here in the sticks." She laughed at her willingness to deprecate their community.

"Maria put a lot of work into it over the last few years; I haven't done much. It's nice that the facilities were all ready when the usual school year started."

"I know you had to have put a lot of money into that effort as well or it wouldn't have happened."

"I can imagine no better use for money, can you?"

“Certainly not. By the way, Johnny is infatuated with Eileen. He could talk of nothing else till he was fast asleep.”

“The girls were pretty hyped when they got home as well. It’s a good situation.”

“It is,” she said. “But this is where I end it, the yellow house. I’m Jeanie by the way – Jeanie Wilson.”

“Glad to have met in person. Robert seems to have done a fine job working the legal problems for the school development.”

“He thinks so. It mattered to him more than anything else he was ever involved with, I think. I’ll let you get on down the lane; it’s getting dark. Good night.” She disappeared behind the Wilson’s gate.

Maria was finishing cleaning up as he entered.”

“Did you jog or just walk?”

“Mostly just walked but coming back I jogged most of the way with Jeanie Wilson. She said Johnny was gaga for Eileen.” He laughed.

“Yes,” she joined the laughter. “Lilly said they were absolutely disgusting.”

“It sounds like everyone is happy with your effort on the school.”

“You too,” she responded.

“I’ve been mostly missing in action, I think. I know that effort’s been going on for a long time and I don’t remember even being involved. I did make a point of realizing how beautiful the lake is though. So maybe I’m getting back.”

“The lake, huh? Good.”

“Yep, the beautiful lake,” he repeated as he put his arms around her. “It’s a lake; I just discovered it and this woman in my arms that I seem to remember from somewhere long ago.”

“Jeanie must have helped you then.”

“What? What’s that supposed to mean?”

“You didn’t recall that she was a trained therapist.”

“No.”

“Well, she is. Maybe you should meet her more formally.”

“Do you think I’m mentally ill or something?”

“Something.” Maria hesitated a few seconds before continuing, “I saw her off and on for a couple of years.”

“You did? Formally?”

“Yes. It shouldn’t be something to be ashamed of do you think? You do realize that we lived through severe PTSD more than once.”

“What do you mean? That term applies to soldiers after a war. Why didn’t you tell me you were in therapy?”

“We’re soldiers Roger; it was worse than war. Conversations with Jeanie as my therapist helped me a lot. I didn’t tell you because I didn’t think you were ready and might think it was silly of me. I think maybe it would help you now to get some perspective on those issues.”

“Perspective? How does one get perspective on things like that – that just seem to keep happening – to me... to us? I have a pretty good vantage point to get a proper perspective.”

“Those things won’t ever change no matter how you look at them, but life going forward can.”

“Like... you think we need marriage counseling?”

“No, of course not. Are you aware of anything amiss in our relationship?”

“No. But I wasn’t with Ellie either.”

“Well I am more in love with you every day and it started out at an extremely high level,” she laughed. “So that’s not the problem from my perspective. But I don’t think either of us has ever

gotten over that disaster at the Allstar game even though the girls have brought us a lot of joy. We had to pretend for so long that we just covered it over. I know I did.”

“I think time is the only thing that fixes things.”

“It helps, but it doesn’t get to the heart of the problem if it’s been covered over and ignored. You need someone beside your spouse to analyze your responses for you. It doesn’t have to be Jeanie; she could help you find someone with whom you’d be comfortable – a man if that matters to you.”

“Well, maybe I’ll meet up with her on the trail sometime again and see how the conversation goes. But I’ve made a little progress on my own in acknowledging that it’s a fucking lake, don’t you think? How about going to bed early?”

“Oh, Roger.” She rushed over to hug and kiss him. “It’s been so long since it was just you and I and evolutionary urges. I so want to go to bed with you.”

And so happiness began again like a trickle from a clogged pipe.

That next evening when Roger was on his usual jog, he encountered Jeanie Wilson again. It was shortly after passing her gate on the outward leg of his trek. She had made a point of catching him and synchronizing her speed with his to facilitate conversation. At a certain point Roger mentioned that Maria had reminded him of the fact that she was a prominent therapist.

“Well, yes, I am a therapist,” she said. “I hope she mentioned it in a favorable context. I have really enjoyed getting to know Maria.”

“Oh yes. I guess it’s no breach of ethics to tell you that she said she had really enjoyed her sessions in your care and that it had helped her come to terms with all that has happened and recommended the same for me.”

Jeanie didn’t speak for quite a few steps until finally she queried, “And you said...?”

“Oh, I don’t know,” he responded, and then looking over at her, appended, “something like ‘I thought time was what healed everything’.”

Seeming to think about that response for a little while, she asked, “You’re not religious, are you?”

“No.”

“I didn’t think you would be. Then you’ve probably not read the Book of Job.”

“No, but I’ve gathered it’s about patience and I’m not blessed with a lot of that.”

“Hmm. I don’t have a lot of patients either.” She laughed as she added, “maybe I’m too expensive.”

Shortly she reached over to tug at his sweatshirt, requesting that they stop at the bench just a few steps further on. When they had both been seated, she proceeded with, “Well, although I haven’t had the pleasure of knowing you personally, it has been my impression that you might be as close as I’ll ever come to meeting Job in the flesh. The good news is that after all the ordeals he had to endure for no fault of his own – just God playing games – Job ended more blessed than at any earlier point in his life.” She hesitated before adding, “If I were a fortune teller instead of a shrink, that would be my prophesy for you.”

“Thank you for that thought, but no...” he breathed in as though to begin a remonstrance, but she put her index and second finger to his lips to stop him.

“Therapists, like medical doctors, have to worry about ethical concerns and because of that I could never treat you professionally.”

Surprised, he asked, “Because you treated Maria or because you have already treated me?” He chuckled as he asked it.



“No, that would not be a concern with both of you being aware and consenting. It is rather that I would have to recuse myself from that role on several accounts like a juror who has been compromised. I probably shouldn’t have treated Maria either. No aspect of why I should recuse myself is ethically suspect by the way, but all of them are totally embarrassing to tell you the truth. Can we just be close friends like I am with Maria instead – friends with two-way communication? I would really like that.”

“Yeah, okay. I would like that too – better, in fact.”

They rose and jogged on faster than before which precluded conversation. And although Roger met her often on his jogs and they conversed freely about all the mundane aspects of their lives, the subject of her seeming to require recusal did not come up until sometime later.

Julie’s arrival was an infusion of life-giving intellectual fluid like an IV to a struggling patient. Just knowing that her enthusiasm was likely here to stay rather than a time limited hiatus from drudgery during a vacation gave permanence to the life-giving substance. She bubbled and emoted about life, liberty, and intellectual freedom, causing Lily and Eileen to bubble with her.

“Julie, you were the warden not an inmate in that institution,” Roger teased only to be given the Eeyore treatment.

“Money, money, money – I had to always be in pursuit of grants for research I only halfheartedly supported. I am so glad to be free.”

Julie became an integral part of their family life after she had purchased her condo in the high rise so close to their place. Roger jogged by it virtually every evening. Sometimes Maria and the girls joined in, and often Julie would either take this occasion to jog back to her condo or she would join them if she saw them going by. Sometimes Jeanie, but never Robert, would join in pairing up with any one of them to reduce the width of the pack of joggers. If Julie had stayed over late working with them on their physics challenges, Roger would walk with her back to the condo and then jog back.

The physics did get restarted, but not all of a sudden, more as a back burner aspect of their lives that the girls actually participated in with questions that allowed for all of them to refresh their previous conclusions and invigorate their interest in proceeding. It became more of a natural backdrop of their lives than an urgent need.

Julie was still reticent with regard to Roger’s preoccupation with a three-down-quark electron. She insisted on addressing the Pauli-Dirac equation and introduced discussion of the sigma matrix with regard to the real and imaginary combination of electrostatic and gravitational charge. These were all infusions of energy into their lapsed endeavor.

They discussed the impossibility of solutions to the more general Poisson equation in three variables rather than just the radial symmetry of the two charge distributions with which they had begun. It was only Roger who could not be completely convinced but he let it go.

Christmas vacation was a wonderful respite from school for the girls even though school had filled them with joy from the very start. Still the relaxed schedule of vacation was welcome even with the unseasonably cold weather. It a time for snowmen and sledding.

Maria and Julie decided that although shopping online might be the reasonable way to go, still the big city, lights, and Salvation Army Santas were sights that the girls must experience on foot. So they arranged a several-day shopping trip to Seattle. Roger did not want to go – nohow! Eileen pleaded Johnny’s case for going with them; since Roger was not going, there would be

room enough. So it was all arranged, and the day of departure came. He would keep the home fires burning.

Roger would have some time to browse his files and the internet to confirm or deny intuitions. He was happy. Relaxed. As evening fell Maria phoned to indicate their safe arrival with the girls and Johnny ecstatic with their discovery of the big city.

He was just off the phone when the doorbell rang; it was Jeanie.

“It’s too damned cold to be all alone, don’t you think? I smelled the smoke from your chimney and figured you must have a nice fire going in the fireplace.”

“Yeah, I do,” he said. “Come on in; you look almost frost bit with those red cheeks. How long you been walking around out there in this cold. Even with that parka you look awfully cold.”

“I am, I am,” she laughed. “I’ve been out way too long avoiding an empty house, I guess. What do they say about carpenters?”

“Let me have that parka; get over there by the fireplace.”

“Oh, thank you. Brrr. I am cold. This fireplace feels great. ‘Creaky steps’, isn’t that what they say about carpenters? ‘Leaky pipes’ for plumbers and a therapist afraid to be alone in her own house. Pretty bad, huh?”

“Is there a problem – have you had break ins or threats from clients?”

“No, nothing like that. Just my own demons, which is what I’m supposed to be capable of irradiating for other people.”

Roger disappeared into the kitchen and brought out a thermos of coffee with two cups and some cookies Maria had left for him.

“Oh, thank you. That coffee feels great in my hands. I think I better wait to drink it though.”

“Yeah, you better. Is Robert working out of town again?”

“Robert’s out of town more than he’s in.” Then, “You’ve never asked why I recused myself in your regard. Why not?”

“No, I didn’t. Just the way I’m wired, I guess. I thought you would tell me if or when you felt like it.”

“Am I interrupting your study or anything? I know you three physicists have been up to something over here.”

“I was just relaxing; and unlike outside, it’s comfortable in here.”

“It is.” Sitting down on the hearth by seeming to just fold her legs and spread them outward, she asked, “So would you mind if we spend some time discussing the issue I have that requires recusal?”

“Sure. Is it an issue though? A problem? I think I’m doing fine.”

“Well, I don’t know to what extent it could be considered a problem and it is obvious that you are doing just fine. But let me just explain why I mentioned that before. You see, even though we’d never met, it isn’t as though I wasn’t intimately aware of your story. It’s like trying to select a jury for a celebrity trial. Everyone knows about your trauma and virtually everything else about you. My dad was a high school physics teacher and a baseball fan; he had played when he was younger and considered himself to have been pretty good at it. So naturally Ray Bonn was a big deal for my dad. The videos of him hitting home runs at Yankee Stadium and of him verbally abusing Tim McCarthy in that interview after the game when he retired got played over and over again at our house. Dad never got tired of it; he’d put that retirement video on and start laughing before it even began.”

“Yeah, my mom used to laugh at dad about that ridiculous discussion and his obsession with probability.”

“What your dad said about the probabilities was most likely correct even though what he had accomplished did seem like it was completely impossible. Your success made it seem somewhat more realistic that you and he were just that much better than the rest. By then I had a life size poster of you hanging in my room. I still have it. I love it.”

“Oh god. That has to go.”

“Anyway, I cried through every one of the disasters that happened in your life. I don’t know where I picked up the reference to Job that I mentioned to you. I’ve never been very religious either, but it just seemed so appropriate, so unfair.”

“Yeah, well... I don’t think it is. But I have to admit to having accessed a pdf of the Book of Job since you mentioned it and I read it. The (quote) ‘Lord’ and ‘Satan’ personalities don’t seem very realistic to me – or the ten thousand sheep for that matter, but life being good notwithstanding truly awful things occurring matches my experience and I’m sure I am not alone in that.”

“Well, those bad things were not karma in your case; I know that much.”

“So, if you were to rescind the recusal, how would you proceed?”

“I thought we agreed to a continuing close friendship and open two-way communication instead. That seems to me to be working out fine and I’ll help you if you help me – with anything; how about that?”

“Sounds fair. So... how does it make you feel that Robert is away a lot.”

“Whoa!” Jeanie laughed. “That’s not the way you do it. You have to be more subtle. Like, was there a reason you didn’t want to go to Seattle with Maria and the gang? How did it make you feel when they left without you?”

“That’s subtle?” He laughed. “Like yeah, well, I thought if I stayed home and got a warm fire going in the fireplace Jeanie might come over and we could begin therapy.”

“So why would you think she might come over in the middle of the night in a snowstorm? Was it because you thought she might smell the smoke from your fireplace or because you suspected she would be vulnerable because her husband is away a lot? Oh, and how does this conversation make you feel?”

“Yeah,” he laughed with her. “It makes me feel like I understand why you may have wanted to recuse yourself and that maybe I should too.”

“You’re good at this; you could have been world class at therapy as well as baseball and physics, I’ll bet.”

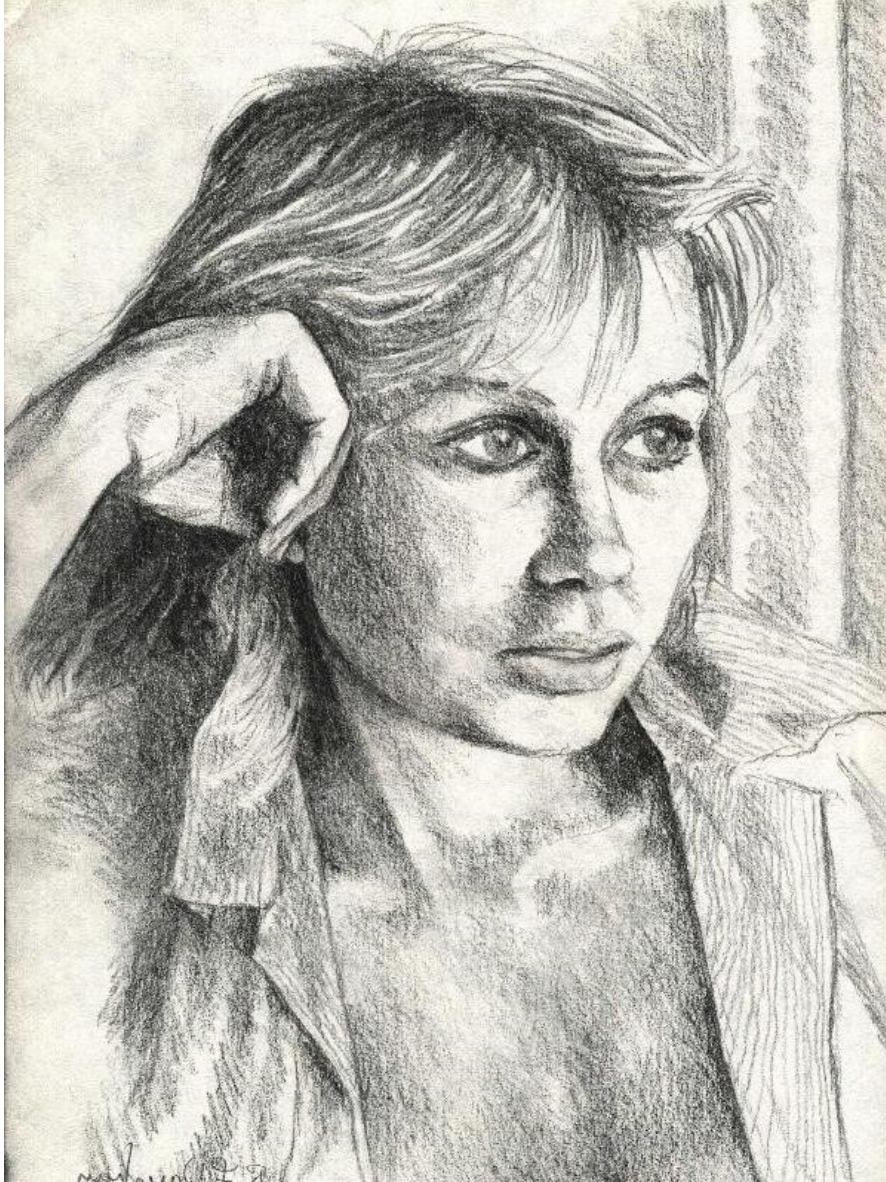
“That’s it? That’s all there is to therapy – ask a few embarrassing questions?”

“Yep, if we were therapists; but we’re not.” She began unbuttoning her blouse. “We’re just two really close friends engaging in intercourse to help us make it through the night. You know what they say about a man and a woman left alone in a room for too long.”

Roger ignored the rhetorical question and stepped over to the hearth as she continued with the buttons. He put his hand down to her and she grabbed ahold of it to pull herself up. Still holding her hand, he reached down with the other to get the half empty coffee cup. Then he led her away from the fireplace, setting the cup on the drawing table as he passed, and picked up her parka that he had laid across a chair earlier. “You’ll need this,” he said as he held it open for her to slip in her left arm and then the right. Taking her left hand he proceeded toward the door. You know what they say about generals,” he said.

She just stared at him transfixed.

“The best ones keep their armies up their sleeves.” He chuckled; she didn’t. He took his jacket off its hook by the door and put it on. Grabbing her dangling hand again, he stepped out the door. “I’ll walk you home,” he said.



The Wilson’s place was dark except for the light in the front yard. He tried the door; it was unlocked. “You really should lock up when you go out,” he cautioned. “You’ll feel more secure.” He reached inside for the light switch that is always situated in that location by every front door.

Jeanie followed reluctantly, agog.

“Are you okay now? Everything looks in order.”

“Please don’t tell Maria,” she pleaded.

“Oh, no, I wouldn’t. What happens between therapists and their patients is sacrosanct.” Then he stepped back out the door, turned and said, “Please don’t tell Roger how close I came to grabbing you in my arms and ruining the rest of our lives.”

As he walked away, he recalled having read somewhere that Wilt Chamberlain, notorious for claiming to have slept with over 20,000 women, had said, "I would have rather loved and made love to one woman a thousand times than to a thousand women once..." Hmm. Roger wondered with snow drifting down around him what the setting for that comment had been. Trudging through the deep snow he looked back to noticed that lights had appeared in a couple more of the Wilson's windows.

Back home and defrocked, he placed a couple more logs on the fire and walked purposefully over to the drawing table, pushed the coffee cup away, opened a drawer to pull out a piece of paper, got a pen from the center drawer, and all in one smooth motion began to write out the Poisson equation in three dimensions. Then he attempted to partition the equation into dimensional parts to determine whether, or to what extent, that could be done. Stopping to think about it, he took the thermos and poured some coffee into the cup, not realizing now that it had been Jeanie's nearly empty cup. It was not too hot; it tasted just right.

He couldn't solve it. The partitioning of the homogeneous Laplace equation cannot be applied to the inhomogeneous Poisson equation. Thinking about it now, he realized that Julie and Maria must have realized long before he had that it could not be done, or they would have done it. He, on the other hand, had always held out hope that it could somehow be done.

Remembering now his talk with Julie after his retirement from baseball, he knew that her years long preoccupation with the problem would have brought her to this point years before. Her relating their solution to the quantum solution of the atom made it obvious that she would have attempted what had worked so well for Schrodinger. She had even doubted whether there was any valid justification for the inverted exponential charge distribution in the radial symmetry case.

$$\nabla^2 V(r, \theta, \phi) = 4\pi \rho(r, \theta, \phi)$$

$$\nabla^2 R(r) \Theta(\theta) \Phi(\phi) = 4\pi \rho_r(r) \rho_\theta(\theta) \rho_\phi(\phi)$$

$$\nabla^2 V = \frac{1}{r^2} \frac{\partial}{\partial r} (r^2 \frac{\partial V}{\partial r}) + \frac{1}{r^2 \sin \theta} \frac{\partial}{\partial \theta} (\sin \theta \frac{\partial V}{\partial \theta}) + \frac{1}{r^2 \sin^2 \theta} \frac{\partial^2 V}{\partial \phi^2}$$

$$\frac{\nabla^2 R(r) \Theta(\theta) \Phi(\phi)}{4\pi \rho_r(r) \rho_\theta(\theta) \rho_\phi(\phi)} = 1$$

Thinking about it now, he noticed that his proof applied to the divergence theorem, which for radial symmetry was tantamount to the Poisson equation. He wrote out the divergence expression.

$$\nabla \cdot \vec{E} = \frac{1}{r^2} \frac{\partial}{\partial r} (r^2 E_r) + \frac{1}{r \sin \theta} \frac{\partial}{\partial \theta} (\sin \theta E_\theta) + \frac{1}{r \sin \theta} \frac{\partial E_\phi}{\partial \phi}$$

In the end his proof had required the acceptance of a series of, however realistic, still quite a few, assumptions that generated the inverted exponential function as a solution. One had had to accept the radial component of the gradient of the potential as the total field strength vector with no rotational or azimuthal dependence. And one had to be aware of experimental observation that field strength is equal to the inverse square of the encapsulated charge out to a given radial distance, and encapsulated charge is equal to an integral of the charge distribution out to that radial distance. All of those were obvious assumptions, although traditionally total charge was assumed rather than encapsulated charge. Finally one had to accept an additional boundary condition at the origin. Breaking those last two links with their more traditional background and credentials must have been what was the most difficult for Julie – and for Maria too. But they had broken away with him.

His mind wandered to that time already so long ago when he had walked diffidently to Julie's office at the end of that long hallway. Her excessive joy at seeing him had made him uneasy, her enthusiasm to begin a project that defied the establishment of which she was a major part had rather amazed him, and her initial resistance to his involving Maria had seemed strange to him. The hesitancy all of them had initially had for the project as though they were attacking windmills made sense.

A simpler resolution than Wile's proof of Fermat's theorem had come up in his and Julie's conversation on that first occasion – both having admitted to naively wasting too much time on it. Roger recalled mentioning where he had left his effort when he realized that one could draw an infinite number of lines through the unit square, with no point (x,y) on any of those lines involving a coordinate pair that were rationally related. He had mentioned it to Julie, but he didn't think she had realized exactly why that had seemed so significant to him. It seemed most ably captured in a passage he recalled from Cantor: *"I see it but I don't believe it,"* he had written to Dedekind. *"There are as many numbers on the side as in the square."* That was the issue with irrationals – their prodigious proliferation. They are numbers without control.

Roger poured some more coffee, sipped over the rim of the cup, realizing that it was cool enough directly from the thermos now to drink without requiring him to sip and that he had finished what Jeanie had left in her cup. Diverted now, he remembered her sitting there on the hearth expectantly unbuttoning her blouse appealing to what there was of a man in him; he shivered involuntarily, sat the cup down and wrote out an expression of Fermat's theorem.

$$a^n + b^n = c^n$$

with a, b, c, and n all integers with no solutions for n greater than 2.

Remembering now the unit square representation and how he had gotten to it, he wrote:

$$(a/c)^n + (b/c)^n = 1$$

Then having defined  $x = a/c$  and  $y = b/c$ , both rational.

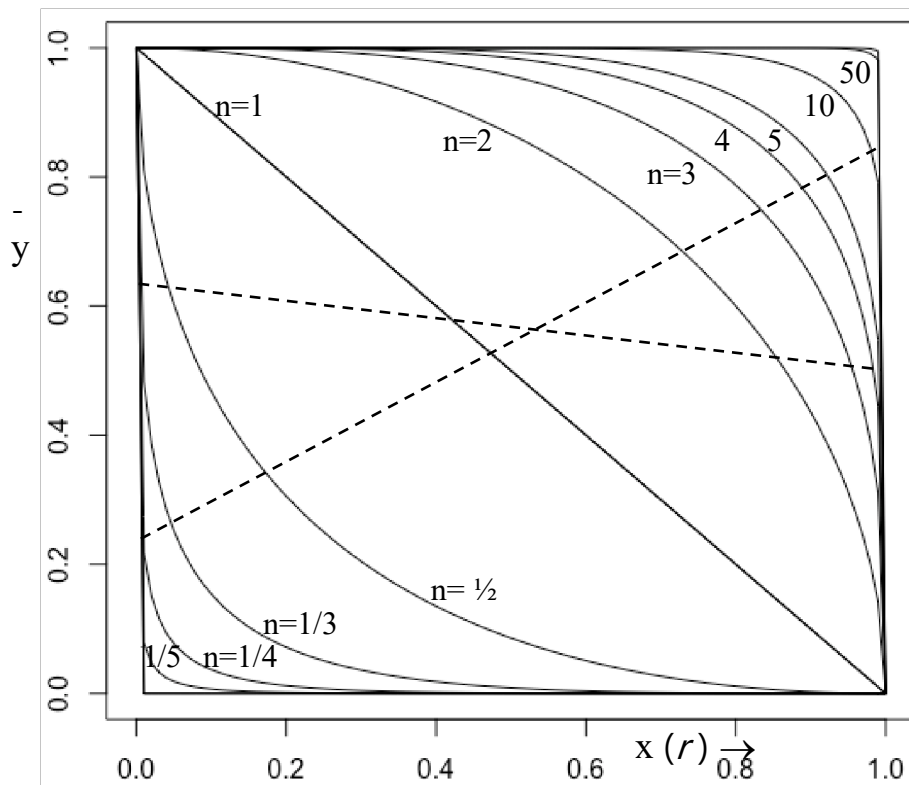
He opened his laptop on the table next to him and proceeded to the icon for plotting curves. He plotted  $y(x)$  for various integral values of n and 1/n. Each of these curves could be expressed as the function,

$$y = \sqrt[n]{1 - x^n}, \text{ for } n > 1$$

No point on any of those curves for  $n$  greater than 2 or rational values less than  $\frac{1}{2}$  has a single value of  $y$  that is a rational number times  $x$ . Yet, one can draw seemingly continuous straight lines at random (he drew a couple) for which  $y$  is a rational value times  $x$  throughout that space. But of course, they are not continuous; there are more points along even those lines for which one or both of  $x$  and  $y$  are irrational.

‘Transference’. That’s what it’s called, he thought. He wished he had told Jeanie that.

If one were to throw a dart with an infinitesimally sharp point at that unit square, the probability of striking a point representing a pair of rational numerals is virtually zero – smaller than tossing a hundred heads in a row with a fair coin that had so consumed his father. Yeah. What he grew up hearing about. What Jeanie had grown up hearing and seeing. No point (a *zero* probability of a point) along any continuous curve for  $n$  greater than two (not a single point!) represents a pair of rational numbers. Like Cantor, Roger saw it, but he could scarcely believe it. Even yet. Even now.



Jeanie might have appreciated that fact; she understood his father’s point about the virtual impossibility of everyday occurrences and not just those we consider weird. Everything is weird; we live in the weirdest of all possible worlds. He poured some more coffee and thought of Jeanie sitting there, her blouse unbuttoned.

As Cantor had noted, one could color in that complete square with pairs  $(x,y)$ , both of whose values were rational numbers, but each of the points that comprise the color of such a square is surrounded in its immediate vicinity by an infinite seething sea of irrational numbers. Irrationals! All those curves for  $n$  greater than two and less than  $\frac{1}{2}$  dodge and miss every single point for which  $y$  is rational related to  $x$ . Fermat shouldn’t have tried to be so cute.

Virtually everything is irrational!

‘We are not therapists’ Jeanie had said. There is no rational relationship between this and that. A man and a woman left alone in a room for long enough would do what men and women do. A continuous sequence of instinctual events like the seething sea of irrational numbers is all that connects the events we think we understand and for which we pretend to be accountable as rational. Why pretend to understand or take the blame or credit for the incomprehensible? We must all recuse ourselves from being anything other than a listener and helpful contributor. When Roger had finally indicated a willingness to submit to analysis, she had offered only the lesson of Job. Every straight line possesses a virtually continuous sequence of rationally related points, but between even them... yeah, the seething sea of irrationality that could be attributed to Satan, original sin, or whatever, but... at least a straight line can reach the next rational event in any case... a straight line.

Roger checked the windows in his browser, clicking on the one with the Book of Job and re-read the final verses:

*12 So the LORD blessed the latter end of Job more than his beginning: for he had fourteen thousand sheep, and six thousand camels, and a thousand yoke of oxen, and a thousand she asses.*

*13 He had also seven sons and three daughters.*

*14 And he called the name of the first, Jemima; and the name of the second, Kezia; and the name of the third, Keren-happuch.*

*15 And in all the land were no women found so fair as the daughters of Job....*

Jeanie had got that right; a connection exists between the beginning and end of Job’s life despite the disasters in between – the irrationals between rational points on a straight line. One could live in such a way, a straight line so to speak, that in spite of all the incomprehensible interruptions, there could be continuity between events that make rational sense.

How did he feel about that?

Good. He was a lucky man; he had finally arrived at a next rational point in his life. Of course that didn’t mean he could necessarily understand what had happened or what would happen next.

It was late – too late to work on the complex algebra of adding electrostatic and gravitational charge or a three-down-quark electron. But he felt like the cobwebs had been swept away from his thinking. It was a comfortable place to set up camp on the side of Mount Everest however mixed the metaphors he chose. He was tired, but his mind was free as he crawled under covers.