

## A Trip Down Memory Lane By Jerry Levy

Things were a bit slow at Lowe Pension Consultants that Monday and I felt like taking the afternoon off. It was one of those mid-October days in Chicago when the temperature hovers near eighty. We used to call it Indian summer when I was a kid and think nothing of it. Some childhood memories are like that. Years later we realize there's more to the story that may not be so innocent and we no longer think of them so fondly.

The chief actuary gave me the afternoon off. No surprise there. I'm the chief, VP of sales, CEO and the only employee. I had to furlough the rest of my staff with little hope for return. The market meltdown was the last straw for my clients. Things weren't so hot for small plan actuaries before then, what with a new set of laws called the Pension Protection Act. More like the pension kaput act someone say in a moment of gallows humor. Then the markets took the worst hit since the depression and most small companies couldn't afford a defined benefit pension plan. I needed some time off to think about my next career, something that involved a tangible product that people could hold in their hands.

Good day to go for a walk along the lake shore, I thought. Maybe cut through Lincoln Park Zoo, a short walk from my cubby-hole office on Clark Street. Odd how some things can come full circle in your life. I worked on Clark Street years ago for my dad, but not in an office. He had a mom and pop grocery store on what was then skid row and now is home to several upscale restaurants. I started working there in the summer shortly after my 13th birthday. According to tradition, I was now a man and expected to help out with the family business. I saw a lot of things most kids my age could not imagine. I kept most of it to myself. It would have been embarrassing to admit a lot of the clientele looked like they could have been models for the posters hanging in the school hallway that warned about the dangers of drinking and drugs.

It wasn't really necessary, but I recorded a message that said I would be back on Tuesday, and left the office. I walked passed a lot of empty store fronts. Lowe Pension Consultants wasn't the only business that had lost its customer base. A few blocks north of my office one of the stores had a new tenant. The sign above the door said, *Memory Lane*. I stopped to look in the window. A man was hunched over with his palms flat on the counter looking back at me over silver wire rim glasses. He was wearing a black watch cap and vest. He lifted one hand, crooked a finger, and motioned for me to come in. Up close, his cap and vest were decorated with blue six-pointed stars the size of nickels. He smiled and I noticed blue eyes that did not seem to go with the reddish mahogany skin tone. What an interesting face I thought.

"Welcome to Memory Lane," he said, and held out a hand. "My name is Edom and whom do I have the pleasure of having in my shop?"

I introduced myself and asked him if business was good. I soon learned that *Memory Lane* was the fastest growing chain in America. Edom started to give me his spiel.

"Some very bright people doing behavioral brain research discovered that certain areas of our gray matter that hold memories can be stimulated." There was a rack of headphones on the counter and he picked up a pair. "These headphones were adapted to help you dredge up those pleasant memories."

My early days on Clark Street had witnessed all sorts of con artists and scams so my initial reaction was this sounded like scientific bullshit. My face must have registered that skepticism.

“My friend, you are probably thinking this sounds like bad science,” he said. “I could give you the web site with the scientific explanation, but why bother? Rent these headphones for two hours and if you are not satisfied, I will gladly refund your money.”

I picked up a pair of headphones and asked, “And how exactly do the headphones stimulate the memories?”

Edom handed me a brochure from a pile on the counter. “You can read about it on our web site. I will point out that the headphones are UL approved and entirely safe as explained in this pamphlet. Perhaps you read about us in last month’s *Time Magazine* about us?”

It was an interview with the CEO. In fact I had read it several times. “What do people do with these things?”

“We call it a Memmy-Hanny which is short for memory enhancer. Most people go to a place where they had a pleasant experience years ago that they want to remember as if it happened yesterday.”

The *Time* interview briefly mentioned the brain research that eventually led to the development of memory enhancing technology. “How do I work the controls?”

He pointed to the plastic control box connected to the headphones that looked like a portable radio. “You stand in a familiar spot and turn this dial to the setting marked “H” as in happy.”

“What’s this “G” setting at the other end of the dial?”

“That, my friend, is for general memories, some of which may not be so happy. We do not recommend that setting because it may bring back some painful feelings. It is there because some people do not want a filter on their trip down memory lane.”

It still seemed like a scam, but I was certainly intrigued. Edom had me fill out a release form. It was just a precaution, he explained, in the unlikely event I had a bad trip, *Memory Lane* had no liability.

Edom took my Visa card and gave me final instructions. “Don’t turn on the device, my friend, until you are standing still. The memories are so vivid it’s like watching a movie and you may bump into something if you move. Of course driving is out of the question.”

“Or operating heavy machinery,” I said with a smile to match Edom’s and walked out the door. I started to walk toward Fullerton, the street that led to the zoo. It was a little past noon and I decided it would be best to have lunch first. The food at the zoo wasn’t high on my list of culinary delights, so I turned around and started walking south where I knew of several good places. It was a good mile and a half, not far from the spot where Dad had his grocery store. A cab would be fast and not terribly expensive, but not on a beautiful day like this. The muscles in my legs loosened up after a few minutes and I started to swing my arms and walk faster.

After 30 minutes or so I slowed my pace, the restaurant was just a few blocks away. I turned onto Ohio Street and stopped. I couldn’t pass this corner without thinking of the grocery store. Ohio was the exit we took from the expressway and we often stopped at this corner for breakfast. I put on the headphones and switched on the Memmy-Hanny.

I saw myself in a Volkswagen minibus on the expressway. Dad was driving, and I was sitting next to him with my hand over my nose. Dad used the minibus to pick up fruits and vegetables at the Randolph Street market so it had the smell of potatoes and cabbage that were past their prime and starting to rot.

The minibus slowed as we exited the expressway at Ohio Street and parked in front of the Ohio House Motel and Coffee Shop. We only did this on Sundays when we worked half a day, from nine to two-thirty. This was where I learned to eat a man's breakfast of bacon, eggs and grits rather than a child's stack of pancakes. I spent many Sundays working when other kids my age were watching Gale Sayers set records at Wrigley Field—the Bears didn't play at Soldier Field until 1971.

I switched off the Memmy-Hanny. From Ohio I walked to Clark, stopped in front of the Rainforest Café and looked up at the address, 605. It was just two numbers off from 607, the address of our grocery which occupied this very spot. It was hard to imagine that this had been a skid row neighborhood. I switched on the Memmy-Hanny and saw our grocery store with the wooden bushel baskets out front supported by metal milk crates. A pair of legs hung over the stoop. One of customers was sleeping off a night of cheap wine, waiting for us to open.

Other memories of working in the store appeared in a kaleidoscope of images. I saw myself behind the checkout counter waiting on customers, adding up their groceries on the back of a paper bag. We had an adding machine, but it was just as easy to use a pencil and paper for small orders. Dad prided himself on how quickly he could add up a column of numbers and would challenge anyone to do it faster. I saw just one person beat him—that was me, but not for a few years after I started working. Guess I got the math gene from him.

Dad must have bragged about my numeracy because I started getting math puzzles from the customers. One stuck with me all these years. It was from a southern gentleman with a country-cousin demeanor who had a side bet with Dad that I wouldn't be able to answer his question in less than 5 seconds.

"If eggs are 18 cents for three-quarters of a dozen, how much for a half dozen?" he asked with a confident smile.

It wasn't difficult to determine that three-quarters of a dozen was nine, so the cost was 2 cents apiece which meant half a dozen was 12 cents. Dad collected the bet and gave me half. I used to tell this story at business meetings as an example of my first consulting assignment.

The penchant for adding up numbers stuck with me. When I first started working as an actuary, personal computers did not exist and we did a lot of the pension calculations on big sheets of graph paper. I would often spot check the long columns of numbers by hand. It was a welcome respite from the tedium of punching a calculator.

That vision faded as I saw myself cutting head cheese behind the deli counter at the back of the store. A customer asked me to cut it thin and I held up a sample slice. "Boy," he said, "I can read the Lord's Prayer through that slice, make it a little thicker." That same customer gave me a laminated copy of the Alcoholics Anonymous 12 step program. It's about the size of a credit card and unfolds along one side. I started carrying it because it was a handy place to keep a few stamps and I liked the Serenity Prayer on the back: *God, grant me the serenity to accept the things I cannot change, courage to*

*change the things I can, and wisdom to know the difference.* I still carry it in my wallet as a memento of a time when I knew drunks, junkies and prostitutes by name.

Then I was no longer behind the deli counter, but confronting a drunk who was panhandling and wouldn't leave. I grabbed him by the back of his belt, jerked him toward the door and gave him a push. He stumbled out of the store and fell head first into the parking meter by the curb. He got up on wobbly legs and said, "Don't hit me anymore." Dad would tell that story at family gatherings as if it were an amusing rite of passage. I laughed along, but never felt right about it. After that incident I would waive a wicked looking crate opener. That was sufficient incentive for even the most inebriated to move on.

The drunk was replaced by the pigeon lady who came in for day old bread, twenty or more loaves at a time. She would carry them up to the Daley Center and the pigeons would swarm around her as she ripped open the bags and scattered bread crumbs. We often asked her why she fed the pigeons, but never got an answer, just a mysterious smile.

The pigeon lady changed into the man who bought a dozen bars of soap at a time and nothing else. He always had his own bag and we had to drop them in, one at a time, without touching the bag. When he walked into the store, his hands were always in the pockets of a cardigan sweater. He took them out to open the bag and I noticed they were badly chapped and red. That was my introduction to obsessive compulsive disorder. Years later I took a course in abnormal psychology at the University of Illinois and thought I had an advantage having witnessed some of the case studies first hand.

The soap guy disappeared and I saw the bottle guy. He walked the streets pushing a grocery cart and collected empty bottles for the return deposit. I heard him talking to Dad about the great job he used to have as an orderly at a hospital. One day he discovered they weren't paying his social security taxes. Rather than complain he just walked away. I asked Dad why he didn't know they were cheating him. Turns out the poor guy couldn't read and threw away his pay stubs. I wondered why bottle man never hired a lawyer. For a while I thought he was so embarrassed that he would rather scrounge for empty bottles than admit he couldn't read and was victimized by the hospital. After a few months I became more cynical. This was Clark Street, so there must be a part of the story that bottle man wasn't telling us. That cynicism stuck with me. Maybe that's why I took a job with the motto, "to substitute facts for appearances and demonstrations for impressions."

Metal nose was the next apparition. He wore a suit and seemed out of place on this part of Clark Street. Dad started a conversation and in a few minutes the man was telling his story. Dad was good at making people feel comfortable like that. Metal nose said he had a sore that he treated with Vaseline. It got worse and became so badly infected that he eventually lost part of his nose. Something about that explanation never seemed right to me. Some forty years later I was reading a novel that finally seemed to explain what had happened. One of the characters had contracted syphilis that went untreated. The disease attacked the cartilage in his nose and eventually it caved in. He wore a metal nose to cover up the deformity.

The scene shifted again. It was a Sunday morning and Dad sent me on a delivery to the Nicolette Hotel at 666 N. Clark. The numbers in the address meant little to me then, but over the years have taken on greater significance when I read the book of

Revelation. The hotel manager was a gruff old guy named Blackie, who was known to be a great tipper. My first impression when I walked into the Nicolette was that it must cater to young, single women. Several were lounging about in nightgowns, and they crowded around and seemed to take great pleasure in bantering with me. I was very embarrassed by the attention, but the ladies seemed so friendly I was reluctant to leave. Blackie handed me a generous tip and told me to hit the road. Back at the store I asked Dad about the curious clientele at the Nicolette. He explained their common profession and I remember thinking that I was glad he told me after the delivery; otherwise, I really would have been embarrassed. As it was, I never got the chance to go back. Dad considered the Nicolette a perk and wanted to send the other delivery boys who needed the money—talking with the young ladies was just the icing on the cake.

A copy of a *Chicago Tribune* newspaper article floated in front of me. Blackie was killed when he tried to stop a burglar who came in through the fire escape. Blackie pulled a .38 caliber pistol and was fatally wounded when the gun discharged during the struggle. I was at work that summer day when the news spread up and down the street. It wasn't a robbery. Blackie was skimming profits and was killed as an example to others who might be doing the same. I never mentioned the episode to any of my friends. Working on Clark Street was my secret life and I wasn't sure anyone would believe that I knew a pimp who was killed in a mob execution.

I walked across the street to the McDonald's and almost got hit by a car. Next time I would remember Edom's advice to stand still when the Memmy-Hanny was operative. As I crossed the street, the McDonald's turned into the Sunshine Gospel Mission. I saw my younger self walking into the Mission's soup kitchen with a box filled with restaurant-sized cans of chicken broth. Many of the faces were familiar and some were customers who would pat my back as I walked by. It made me cringe inside, although I always smiled when I recognized a customer. I used to see some of them begging on the streets when I walked to the subway or to the downtown area that Chicagoans call the loop. This close association gave me a different perspective on the street people that are in most large cities. I see people who remind me of old customers rather than indigents. I never give them money having witnessed firsthand where some of it went—for cheap wine and rot gut whiskey.

There is one exception to my rule against handouts. When I leave my office at night there's a guy named Duke selling newspapers on the street corner. Duke has that street person look that I always associate with the drunks that came into our store. I give him a buck for the paper even though the price is only fifty cents. I figure he's a working man so I don't mind paying for the service. Duke is probably using part of the money to buy liquor, but he must have his demons under control because he's at that corner no matter the weather.

When I started working for Dad there were two bars on the same block as the Mission. These weren't friendly neighborhood taverns. If they wanted a delivery, I had to wait in the foyer until the barman saw me. That was Dad's strict order which was fine with me. As soon as I got within ten feet of the door, the smell of cheap whiskey assaulted my nasal passages like a dose of Vicks. I began to associate the odor of any alcoholic drink with the stench coming out of these bars. When my high school friends experimented with beer, I took a few sips and became nauseated. It wasn't until my junior year at college that I could drink a whole glass.

Sandwiched between the Mission and an empty store front was a dry cleaner whose manager was one of the nicest people I would ever meet on that stretch of Clark Street. We had a standing routine that went on for years: he would invite me to go shooting in the basement of his building and I would decline because I couldn't take off work.

It wasn't until the winter that I realized most of the locals didn't have much need for a dry cleaner. That's when Dad told me some of the dry cleaner's customers left with small packets of folded paper that held white powder, not clean clothes. The offer to go shooting was not idle talk either. Many police officers acquired a second gun when they picked up their laundry. I didn't dwell on the manager's side businesses, but it taught me that people are far more complex than I had ever imagined. That knowledge came in handy years later when I started working as an actuary and had to deal with committees and ferret out hidden agendas. Just because someone smiled didn't mean they agreed with what was said.

I switched off the Memmy-Hanny, walked to the end of the block, crossed over Ontario Street and went into Portillo's Hot Dogs restaurant. The line to order food was longer than I had anticipated, but it gave me a chance to reflect on the memories. None of these people, I thought, had a clue as to what this section of Clark Street used to look like.

Although the hot dogs are excellent, I ordered an Italian beef sandwich. I needed something a little more substantial to chew on while the image of Clark Street in the 60's brought back feelings of excitement and dread when I first went to work in the grocery store. The initial satisfaction of being allowed to enter an adult world soon gave way to the shock of witnessing an ugliness that was hard to imagine in my other life away from the store. Then there was the unspeakable fear that I would be tainted by association. After a long day of working in the store I would take a hot shower, but no matter how much soap and shampoo I used, a bad smell seemed to ooze from my pores. Back at school after a weekend of working on Clark Street, I felt like an outsider. It took a few days to block out the images of the odd people I saw.

I went outside, turned on the Memmy-Hanny, and saw Portillo's change into the Diamond Lounge at 660 N. Clark, just a few addresses down from the Nicolette. Dad had instructed me to wait outside with my delivery (a case of toilet paper) and to absolutely not even think about going in. I had wobbled up the street with the big case on my shoulder and stopped outside the entranceway. After ten minutes no one came out, so I walked into the foyer with the case in front of me and peeked through the window of an inner door. That's when I saw the stage bathed in a hot pink glow that seemed to flash like neon even though the lights never blinked. There was nobody dancing because it was too early and I remember feeling both disappointed and relieved. My revelry was short-lived when the manager came storming up and told me to drop the toilet paper and get out—only he used language as colorful as the stage lights. I never made another delivery to the Diamond Lounge either. Mayor Daley revoked the lounge's liquor license a few months after I started working for Dad. It seems vice detectives raided the joint in June and found dancers were soliciting for more than tips. All these years later I wonder why those detectives never paid a call on the Nicolette. Or maybe they did until Blackie stopped making his full payments to the mob.

I made deliveries to other less glamorous buildings that floated in front of me like Marley's ghosts. Most were flop houses with floors covered by old newspapers, or by dirty pop bottles filled with cigarette butts and bugs. I didn't come away with many tips, but the smell clung to my clothes and hair for several hours afterwards. These buildings were home to many retirees whose only means of support was their monthly social security check. It must have been a pittance given the squalor of the rooms I visited. In retrospect it's not a coincidence that I was drawn to specializing in pension plans after getting a degree in actuarial science.

Dad always said that if you worked like a man you should eat like a man. So he would send us out for lunch. I turned off the Memmy-Hanny and walked south on Clark for two blocks where it crossed Grand Avenue. The St Regis Hotel used to be at this corner. I switched on the Memmy-Hanny and saw myself at the restaurant on the ground floor of the St. Regis. I was a regular customer and the waitresses treated me like family. The burgers were pretty good and I really enjoyed the down time. But the real attraction was reading Mike Royko's columns in the *Daily News*. Royko was in his prime in those days leading up to his Pulitzer Prize. His columns were a common thread of conversation as we handed off the paper with a smile dropping hints about the exploits of his fictional character, Slat Grobnik, or laughing at his audacity to take on City Hall and the first mayor named Daley who presided over city council meetings like a warlord, keeping the aldermen in line using clout rather than a sword.

Many of Royko's columns exposed hypocrisy. Dad said he had a good nose for bullshit. So it was important for Royko to make sure he set an example in his own life. He rebuffed celebrity and personal aggrandizement and went to great extremes to remain impartial. Reportedly he would hang up on celebrities who came to Chicago and called him to arrange a meeting or photo op. That made a huge impression on me as a kid and I learned to look at situations to see who was being influenced by something other than the facts. It was a valuable lesson for a future actuary.

I turned off the Memmy-Hanny and looked at the address, 516 N. Clark. All these years later, that address is still a good one for lunch. Only now it's called Maggiano's.

Edom was right; I no longer doubted the efficacy of the Memmy-Hanny. It was time to head back to *Memory Lane* unless I wanted to pay late charges. Deciding to take a different route, I walked east on Grand Avenue and turned left at Dearborn. After a few blocks I stopped. This was a familiar corner and I switched on the Memmy-Hanny.

Several men in business suits were coming out of the Raleigh Hotel where Dad sent me on a delivery. It was unlikely that they were staying there and I couldn't figure out what was going on. Back at the store, Dad told me these were detectives investigating the Richard Speck murders. We had a police blotter sketch of Speck hanging in the store and had followed the newspaper reports. It was shocking to think we had routinely delivered groceries to a hotel where Speck had stayed. I kept the sketch for a time. Eventually I decided a souvenir of such misery was not cool and threw it away.

The Raleigh Hotel was located at 648 N Dearborn, just a few doors down from a red granite building designed by Henry Ives Cobb in 1892 for the Chicago Historical Society. The Excalibur night club now occupies that corner of Dearborn and Ontario. Chicago folklore suggests the building is haunted. Unlike Bert Lahr's cowardly lion, I

don't believe in the supernatural. But when I drive by that block I am still haunted by the memories of the Raleigh Hotel and a monster named Speck.

The wind off Lake Michigan felt considerably cooler on the walk back to *Memory Lane*. The weather tomorrow would be more like autumn in Chicago. It wasn't unusual to see thirty or more degree changes in temperature this time of year. The vivid memories were likely part of the chill. I looked at the control box and switched the setting to "H." When I had my own *Memory Lane* franchise, "H" would be the only available setting.

Author's note: All the addresses in this story are based on real buildings that were demolished to make way for the gentrification of the neighborhood around this part of Clark Street.



A Turn-screw *tlhImqaH*

by: Melvyn R. Windham, Jr.

“Who’s that guy over there?” asked Senator Bargas.

Senator Anthony responded, “Who?”

Bargas pointed across the busy Chamber. “The happy-go-lucky guy over there.”

“Oh, him? He must be the actuary from Social Security. He’s supposed to testify today.”

“Actuary? Hmm... Okay, what’s his problem? Why’s he so happy? What’s an actuary anyway?”

Anthony said with disgust, “Why, it’s only the number one job in the world.”

“You’ve got to be kidding me. Can someone really love their job that much?”

“It’s low stress – good pay. All you have to do is be smart.”

Bargas flinched. “Ouch!”

“Oh, sorry,” said Anthony. “I keep forgetting your wife’s accident.”

“Nobody should be that happy about their job!” Bargas said angrily. “Especially smart people! Look at him – all snug and full of himself! What – do they think they rule the world? Do they think they’re better than us? Why, I’d do anything to teach those guys a thing or two! I’d humble them – make them miserable like the rest of us! Why, if I ever get my hands on ...”

“Hey, if you want to do something, I have a few connections. There have been ... well ... um ... experiments.”

“Experiments?” asked an intrigued Bargas.

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There I was, *juppu’wI’*, flying my shuttlecraft along the Inner Loop, watching out for Romulans. The Beltway was full of jerks – more than usual. One of them flew past and cut in front of me. I yelled out my window, “*qoHHom!*” as I fired a photon torpedo, and I gave him the finger. That showed him!

I was on my way to a better life. Best Job in the universe, and it was going to be mine! All I had to do was pass a series of nine simulations, and I would be a full-fledged member of the Federation. The first testiwast awaited me in just thirty minootas, and I didn’t want to be late.

I thought about the poor saps in the other shuttlecrafts. What purpose did they have in life? If you weren’t in the Federation, you were nobody. But it was as easy as anything to get in – if you were good at math.

I could never understand it. Why did people avoid math, anyway?

You see, I used to be a tutor. I tried to show others how easy it was, and how they could live the good life, but O no, *juppu’wI’*. They would have no part of it.

There was this pretty Betazoid, the wife of politick. I thought she come around and be smart, but when I did the old in-out, that’s exactly what happened: in one ear and out the other. She just broke down and cried boo-hoo-hoo; and she ran out the door. Didn’t even pay Your *ja’wI’nap*. Word is: she went crazy cuckoo. If only she just listened to me.

“Whoa!” I said as I passed a Romulan. I slowed down real quick like. This one was cloaked!

Where was I? Oh yes – one day I just gave up on tutoring. I told myself: “That’s their life and this is mine. Yes – me and mine – that’s all that matters. I’ll join the Federation and bring in the dough. And all the others who won’t do math? They’re nothing but tribbles!”

I didn’t waste any time after leaving Academy Prep. I signed up for this first simulation, set up a job interview, and I even had a date lined up! O yes – life was looking up, and nothing could stop me!

Well, almost nothing. I got this communication just yesterday. Some Klingon chick said like, “We’re going to have to move your exam location. Your current location is full.” She wanted me to go to the other side of the galaxy!

I told her how crazy she was. I asked about my bud Sammy – did they move him too? She said No. I told her I signed up before he did, but she was a smart Klingon, she was. She told me my last name began with ‘W’.

She didn’t have to say any more. Alphabetical Discrimination!! *va!!* There’s no law against it, yet no reason for it. I was bumped because I was at the end of the line! But never you mind about it. In the end, it would be *Qapla’!* That is – after my testiwest, and my intervooody, and the killer date! Nice try, Alphabet Lady! She couldn’t stop me.

Which brings me to the beginning of my story. Remember me in the shuttlecraft? I didn’t know I was going to a remote asteroid, only to find a rusty garbage scow. It made me nervous – O yes! Was I in the wrong place? I checked my numbers, and sure enough, I was there.

I sang my favorite song as I approached the scow. It was a song my mom taught me when I was nothing but a little *puq*. You might recognize it from Danny Kaye:

*Inchworm, inchworm,  
Measuring the marigolds,  
You and your arithmetic,  
You’ll probably go far.*

*Two and two are four.  
Four and four are eight.  
Eight and eight are sixteen.  
Sixteen and sixteen are thirty-two.*

That song always calmed me down, O *juppu’wI’!* It captured the essence of all mathematical thought, and it always helped me get my mind in order. It prepared me for the ordeal I was about to go through; or at least I thought it would.

When I got to the front door, this old fogey stood there. She looked like that girl in the Pilot episode with the brain people turned off – all hunched over and sores all over her face, only she was smoking a char. She asked without removing her smokes, “You Doug?”

I jaw-dropped her and said, “Yeah. What’s it to you?”

“The test’s over this way.”

As I followed her through the garbage scow, she smoked all the way. I asked her, “Are you allowed to do that?”

She blew smoke in my face and didn’t answer. Kirk wouldn’t have put up with that. O no!

She led me to a small room with one desk and an old ‘puter terminal.

“You’ve got to be joshing me,” I said.

The old scarface laughed. “You better get cracking. The clock’s ticking, and you only have four hours.”

“But the ‘puter isn’t on yet.”

“I’m sure you’ll figure it out.” She went out and closed the door behind her.

“*va!*” I yelled. “Aren’t you supposed to stay in here with me?” Was the world coming to an end?

No answer!

I had no choice but to turn on the ‘puter. It took ten minoatas to boot up. “Barbarians!! This would never happen in the 23<sup>rd</sup> century!!” The whole time I was planning my revenge. This *qoHHom* of a proctor had to be reported!

Finally, an icon popped up saying “Exam1.” I clicked on it. The screen went black and a cheesy trumpet fanfare sounded. The words “EXAM1” flashed across the screen in a large ASCII animation.

“Cool!” I said. That was being sarcastic, *va!*

I could only imagine how Sammy was faring with his simulation. Would all the ‘puters in the room sound that stupid fanfare at the same time? And why couldn’t they fit one more terminal in there for me?

Question #1 came up on the screen. “ $X = 3 * 4$ . What is X?”

The choices were:

- A) 7
- B) 12
- C) 3.4
- D) 0.75
- E) None of the Above.

“*nuqjath!*”

I goggled the poser for a full two minoatas. What was I missing? Was this the CFA simulation? I didn’t want to join the Ferengi Alliance! WWSD? (What would Spock do?)

I wanted to question the proctor, but she wasn’t back yet. I went to the door, and it locked up tight. I jiggled the knob and knocked. “Hey! Is this the right testiwest?”

A piece of paper came from under the door. It said, “Leave the room and you FAIL!”

That was strange. I yelled back, “What if I have to wee?” No answer.

I had no choice, so I went back to the ‘puter. I picked the answer B, and the ‘puter cheered. The words flashed: “YOU GOT THAT ONE RIGHT!”

I waited for the next question.

“#2) A tractor is traveling 20 miles an hour through a cornfield.”

On the screen, a ‘toon farmer in a tractor bobbed up and down while tall corn moved past him. The farmer waved at me, and I waved back. Then I hit myself. What was I doing – waving at a ‘toon? *va!*

A minoota passed, and I realized, “Oh, there’s a question in this, right?” I didn’t understand what kind of answer they were looking for. “20 miles an hour – and then what?” Was this the *Kobayashi Maru*?

I asked the farmer, “What’s the stupid question?”

He frowned at me and the corn moved faster. I still didn't know what to do. Then the vantage changed, and the tractor came directly toward me. It was like being in a holodeck. I couldn't help but watch. Besides, I didn't want to blink and miss the question.

The corn was rushing past my head, and the tractor was getting closer. It was making me dizzy.

The farmer just frowned at me and kept on coming. It was real horrowshow, I tell you!

Before I knew it, the tractor jumped out of the monitor and into my head. O *juppu'wI'*! I was not prepared for that! I screamed and my head exploded and everything went blacker than a hole!

\* \* \*

I heard a clicking noise. When I opened my peepers, there it was: "FAIL" flashing across the screen.

"*va!*" I yelled. "I snoozed off! Why did I do that? The 'puter timed out and I missed it! I'm such a *qoHHom*! What time is it?"

There was no clock in the room. I got up, tried the door, and it opened. Old Charface was asleep at her desk – a half-smoked char smoldering on the floor in front of her.

I shook my head. "*baQa'!!* I'm complaining," and I was out of there – just like Bones from a transporter room.

I got in my shuttlecraft, and got myself away from there – real quick like.

As I went into warp, I noticed a headache coming on. It was going to be big, O yes, *juppu'wI'*! But I had no idea. On the Beltway, I noticed several shuttlecrafts stopping in front of me. A traffic jam! I looked at my navigational systems to view how fast I was going, and it hit me. The headache exploded again. In fact *I* exploded. I barfed the passenger's chair. At least I think I did. Before I knew it, there was a tree through my vid screen – then blackness again. O sweet darkness!

\* \* \*

When I came to, I was tied up in a chair on this stage. All these people were viewing me from the audience. On stage with me were four people sitting all panel like. One was the simulation fogey smoking her char.

Some *loD* in the panel spoke to me. I had no idea who he was. "I must apologize," he said. "We should have caught you before you left the examination room. But Suzie over here fell asleep."

Suzie said sarcastically to Your *ja'wI'nap*, "Sorry."

The *loD* went on to the audience, "Behold our subject! As you can see, he had a little difficulty driving home. He left before we could warn him."

"What did you do to me?" I insisted.

Ignoring my question, he asked, "What did you in, may I ask? Was it the road signs? The mile markers? Your speedometer? Another car's license plate?"

"I have no idea what you're going on about!"

"Here, answer me this." He flipped a switch and these lights came on. "How many lights do you see?"

*va!* What a simple question! I answered, “There are f...” Well, I tried to answer. I tried again. “There are f...” There it was – that terrible headache. I wanted to barf the audience, but that would be bad. I had to answer the question, but I couldn’t get the words out. I couldn’t even look at the lights without my head throbbing. “I can’t!” I yelled.

“You can’t what?” asked the *loD*.

“I can’t say it!”

There was thunderous applause from the audience. “Bravo!” they all yelled. “Hurray!” I didn’t know whether to laugh or cry boo-hoo-hoo! I finally chose the latter.

“Inchworm, Inchworm. Measuring the marigolds...” Was that me singing? O yes, strange it was – it shut them up quick like. I sobbed, “What did you do to me, *qoHHompu*?!?”

“What’s the matter, Dougie Boy? Did you lose the ability to count? Let’s hear it. Count to ten.”

I tried, “wo...” but it was no use. The headache was just too much.

After more clapping, they finally filled me in. “You see, Dougie, we planted a math inhibitor chip into your brain. You are no longer able to perform math functions without getting deathly sick.”

“*nuq*?!?” I yelled. “When did you do that?”

“In the examination room. Don’t you remember?”

“When I fell asleep?”

“This young man is so smart,” he said followed by a few audience laughs.

“You can’t do this!” I yelled.

“It’s too late. We did.”

“But I didn’t give you permission. I’m going to sue!”

“Whoa,” said the *loD*. “Don’t you know who I am? I’m Senator Anthony, your chosen representative. You can’t sue me. Even if you could, how much would you ask for?”

Even the question sent my head spinning. It wasn’t fair, O *juppu’wI*!

“Cheer up, Dougie. Look on the bright side. You’re one of us now. Hey, we can’t do math either.”

“Is that what I’m to be, then?” I asked. “Your turn-screw *tlhImqaH*? How will I navigate? What about the Federation? How will I survive?”

“Oh, cry me a river!” replied this sorry *qoHHom* of a politick. “If you’re so smart, you should know the answer by now. Avoid math! You’ll figure it out.”

The audience laughed again, and I said no more. There was nothing I could do.

\* \* \*

Next thing I knew, they untied me and left me behind. I was free to go. I found my shuttlecraft docked – all fixed up like new. It was difficult to navigate home, but I found a way.

The intercom was on NPR, the only open channel that would survive WWII, but I winced when they began the financial report, O *juppu’wI*! I heard, “Let’s do the numbers ...” and the headache started. They were playing that happy moolah music, but I wasn’t taking chances. I cut off the intercom and thought un-mathy thoughts. I was going to have to learn how to ignore numbers!

When I got home, I turned on the view screen, but I muted it so I wouldn’t hear any numbers. I found out it was Thursday. Tomorrow was the big interview. “*va!*!” I said. “What am I going to do?”

“Can I really join the Federation in my condition? Surely there has to be a way to do it without doing any m.... Besides, isn’t that what ‘puters are for?”

*Qapla!* I could fake it!

That next day, I arrived early. I couldn’t rely on coordinate numbers because they’d make me crash! Planet names were no problem – thank the Almighty Bog and his angels! When I got closer, I landed on a moon that looked like the right place. And yes, it was the right place!

They led me to my future boss. I hi-ed him, and he hi-ed back. When I overheard my future peers going over some numbers, my eye twitched from the pain. Mr. Thacker – that was the interviewer’s name – asked me, “Are you okay?”

“Yes,” I lied.

We went into a conference room and he asked me questions.

“I see you’re fresh out of college. You were a math major? Tell me about it. What was your favorite math class?”

*va!* There went my twitchy eye again.

“I liked all of them.”

“Oh come on, you’ve got to have a favorite.”

I couldn’t even say ‘math’. This wasn’t good. You tell me – what class could I tell him that wouldn’t make me barf him? I knew what to say: “History.”

Mr. Boss-man gave me a Spock eyelift. “That’s interesting. Math History? Why?”

“You know. It’s about ... well ... famous ... people.”

“I see,” he said as he wrote some notes.

Then he continued, “I see that you took your first actuarial exam this past week. Can I assume you passed?”

Ah! Could I answer that question truthfully and still get the job? O yes *juppu’wI’*, I could. The Federation hung in the balance!

“Um, I haven’t gotten the results back in the mail.” That satisfied him, and boy was that close!

“What do we have here?” he went on. “It says you speak Klingon. Is this for real?”

I couldn’t lie to him, especially since it was on my roster. “Fluently,” I answered.

“No way!! Well, I’m a Trekkie, too. I’ve seen every episode!” He held up the Vulcan sign and said, “*Nanu-Nanu!*”

I suppressed a sigh, smiled, and continued on with the interview. We talked about my people skills. Lucky for me it wasn’t about math. We were hitting it off pretty well, and I thought the job was mine, but *va!* was I wrong. In the end, Mr. Boss-man stood up and said, “Well great. It’s time for your math test, now.”

“A testiwest?” I asked in fear.

“Sure. We’ve got to make sure you can do math,” he answered with a laugh.

I had no choice. I had to at least try. It was multiple choice. “I could fill in random answers, and get some of them right. Maybe enough to get the job,” I told myself, but there were numbers all over the pages. It hurt to look at them. But why? It was only scribbled symbols on a page – hardly anything to give a *loD* a headache! Nevertheless, *juppu’wI’*, it came. I couldn’t mark any random answers without looking at the page, and I couldn’t look at the page without seeing the numbers, and I couldn’t get the job without marking answers. The Federation was falling away from me! It was a vicious circle and it was spinning in my head until darkness overcame me.

When I came to, I was lying face down on moon rock next to my shuttlecraft. People were laughing at me. I ran away, boo-hoo-hooing, “I guess I didn’t get the job.”

\* \* \*

Distraught, I went to the food repository. Cooking a good lunch for myself would cheer me up. I went to the low maintenance isle. I looked at the pasta. There were so many choices. “Which one should I pick?” Then I remembered. I used to compare prices!! It was always different. Sometimes there was a sale, and one would be cheaper, but now I couldn’t tell! *va!* It wasn’t fair!! I grabbed a random pasta.

It was like that throughout the repository. I used to go for the best deals, but no more. Now I had to rely on the luck of the draw. I asked myself, “Is this how other people do it?”

When I got up to the cash register, the *loD* said, “That’ll be fifty four sixty two, please.”

I heard the words, but it didn’t make sense. I stared at him. He stared back, until he asked, “Are you going to pay me?”

Oh yeah – that moolah thing. They didn’t use it in the 23<sup>rd</sup> century, but I needed it now. I opened my wallet and realized my situation. If I had a credit card, I could just give it him, but I never believed in them before. I always paid with the shiny stuff.

I flipped open the cash part, and the headache came pouring out like butterflies. It didn’t go away until I closed it back quickly.

“Come on!” said another *loD* behind me.

I had to give some moolah. I opened the cash flap again, but there was nothing but that headache. *va!!*

I yelled, “I can’t do it!”

“What?”

“I can’t count it!” I was sobbing boo-hoo-hoo. O, I was a pity sight!

“Here,” said the *loD*. “I’ll do it.” He took my wallet and he took the green out. There was nothing left, O *juppu’wI!* He gave me back my wallet and said, “Thanks for the tip.”

The people round me laughed and cheered. I beamed out of there quick like.

Sure, I know what you’re thinking. I could have complained at the customer desk, but what would I say? How could I even claim how much moolah was in there? You see – Your *ja’wI’nap* had no other choice.

I just went home.

\* \* \*

It was a lousy week, O *juppu’wI!* First I failed my testiwest; then came the lousy intervooody! And finally, that cashier stole all my moolah. What was next?

I hit myself in the head. The date! *va!!* “There’s no way I can see her in this condition!”

I picked up my communicator and got out the piece of paper that had her num... Aw *ghay’cha!* How in the universe could I contact her? I stared at the communicator keypad and nearly fainted. The buttons were insurmountable hills with taboos written all over.

“Hey! I could contact the operator. That’s just a button, right? But which one? If I look at the numbers long enough to tell, I’ll barf the floor. No – this isn’t going to happen.

“I going to have to stand her up, but can I afford to?”

She was hot! Uhura’s skirt had nothing on her!

“If you stand up one hot chick, she’ll tell other hot chicks – and no more dates.”  
*va!* I had to stay with the date.

I needed moolah, though. With my eyes closed, I reached into my drawer and replenished my wallet. *va!* – was that hard!

When to show up? Turns out I was early – super early. When she opened the airlock, she was nowhere near dressed, and she said, “Huh? I thought you were picking me up at 7.”

I winced at the number, but kept my cool. “I couldn’t wait to see you.”

She blushed and said, “You’re two hours early! Did you really want to see me that badly?”

“Oh yes,” I said without missing a beat.

She smiled and said, “Okay then. Just give me a few minutes and we can go eat.”

Yes, I was too early, but I was surviving. There was hope for me yet. When I escorted her to my shuttlecraft, she gasped.

“What’s that all over your dashboard?”

“Oh nothing,” I answered nonchalantly. “It’s just cardboard.”

“How can you see how fast you’re going?” she asked as she tried to take it off.

I stopped her, “Oh, please leave it. I like it there. The stars tell me how fast I go.”

We had a pretty good time at the restaurant. Evidently there was no math in the language of love. We were doing great and we almost made it all the way through dinner. That is until she brought up Victor Borge. Yes, you heard me right.

“You should have seen him last night. He’s so funny on the piano!”

“Yeah,” said I. “I’ve seen him before.”

“Can you believe he really plays the music upside down?”

“Yeah – and that crazy routine with the Hungarian Rhapsody! He sure showed his partner on that one!” For the first time in a week, I was actually laughing.

She went on, “You know he doesn’t just do music. Last night he talked about his phonetic punctuation.”

“Oh, I remember that. Hey look! Here’s a question mark. Squeeeelch ponk!”

She was laughing, too.

“And then there’s his Inflationary Language,” she said.

I stopped dead in my laugh. I didn’t know why, but there was something I couldn’t quite remember. Inflationary Language? *va!* What was that?

“You know,” she said. “Inflationary Language?”

“Um – what’s that again?”

“That’s when you add one to each word you speak.”

“You add wo....?” Of course, I couldn’t finish the word. Numbers!

“Oh, you’re so funny! You know: It’s Two-derful three see you three-day.”

“*nuqjath*?”

She frowned. “You know Victor Borge, but you don’t know his Inflationary Language? You’re starting to creep me out here. It’s not really that hard. Just take a word like ‘wonderful’, and you add one to the number part. That’s how you get ‘two-derful.’”

“That’s ridiculous,” I said. “There’s no number in wo...; in wo...”

O Great, *juppu’wI!* It was another word I couldn’t say – just because it started with a number sound!

“What’s your problem?” she asked. “Here, let me hear you say ‘two-derful.’”



“Tw... Tw...” I just couldn’t do it, *juppu’wI’!* I must have looked like a *qoHHom*. Plus, I could feel the sickness coming on. She just stared at me – open jawed.

That was when the waiter came to present the bill.

“Well, look at that,” said my date. “It’s time to pay!”

I cringed, but why? She didn’t say any numbers. But wait! She did. She said that one common word that sounded like a number. *Qu’vatlh!!* She had broken me!

The waiter asked me, “How would you like to pay, sir?”

He said it, also! Didn’t they know I was getting sick? I protested, “Stop saying that word!”

The waiter stared at me. “Um, what word, sir?”

“Never mind, here you go.” I pulled out my wallet, hoping I could open it this time, but it just didn’t work. I couldn’t get myself to open it. I had no idea how much to give him. Plus, how could I calculate a tip??

“*QQQuuu’vvaattttlllllhhhhh!!!!!!!*”

O, that got everyone’s attention. I asked my date, “Why don’t you pay?”

She got all indignant like. “What? Are you asinine?”

Groan! Another number at the end of that word! I wanted to barf!

She got up, saying, “What would I do that for?”

Another one! *va!* “Make the headache go away!”

“Don’t expect another date.”

It got even worse. “What? O, don’t tell me. ‘Date’ ends in ...” I couldn’t hold it in any longer.

I barfed. Big time! As my date walked out, she slipped in it. This got her barfing. And that got the next guy barfing. And, well – you get the idea. It was like those Barf-o-ramas you see in the movies, only grosser. Before I could even think to apologize, I blacked out.

\* \* \*

When I awoke, much to my dismay, there was that Senator Anthony *qoHHom* looking over me. I was lying on this couch in some big mansion of a cargo hold. It seemed familiar, though – as if I had been there before, but couldn’t quite remember. Something just wasn’t right, *juppu’wI’*.

“Oh look,” said the politick, “he’s coming t..”

“No!” urged someone else gently. “No number words. Remember?”

“Oh yes, sorry my Dougie boy. I would like you t.., um... Here – meet Senator Bargas. You’ll be living with him now. It appears you have gone a turn to ...”

“Aagh!” I yelled.

“Sorry – a turn ... on the worse side. Is that better?”

“Why did you do this?” I moaned.

“It was f.., um... your own good. Oh, I almost missed that one,” said this Senator Bargas.

I groaned again at the last word.

“This is going the difficult way,” said Bargas. “We feel bad that the chip seems going way far in the wrong direction. You can stay with me, and I’ll take care of you. That way, no ... body can take advantage of you. I’ll see ... on your every needs.”

“*Qapla’!*” said I, wondering if they could sense my sarcasm. Bargas did look at me funny.

That night, after Anthony left, it was just me and old Bargas. As he fixed dinner, I kept trying to remember why the cargo hold looked so familiar. Why couldn’t I remember?

“Are you ready ... on the dinner?” he asked me.

“Sure.” He sat me down at a table. He put a plate of roast beef in front of me and an empty wine glass.

“Would you like some wine?” he asked.

“Sure.” He poured me some, and stared at me while I ate heartily. It was making me a little nervous. Why wasn’t he eating?

I finished my wine, and he insisted, “It’s good wine, isn’t it? Wouldn’t you like some more?”

Okay – the guy liked his wine. I couldn’t turn down his hospitality, so I said, “Sure, top me off.” He poured me some more, then slammed the bottle flat on the table. It made me jump. He stared at me while I kept on eating.

Finally, I couldn’t stand it any longer. I asked him, “So, it’s just you and me, right?”

“Yes,” he answered. “I couldn’t help noticing – earlier this morning, you said *Qapla’*. Not many people know what that means.”

“It’s only Klingon,” I said nervously.

“Did you know I used to have a wife?”

I stopped eating, because he said one of those number words, and he didn’t even try to stop himself. I answered, “You did, huh?”

“Dang right I did! You want to know what happened to her?”

He was still saying that word. I was getting dizzy.

I answered, “I think you’re telling me.”

“She died!” he said with emphasis. “She was very depressed, you see. She was never good at math, and she took this class in college. Some brat tutored her and made her feel stupid. He was a Trekkie, just like you. He thought he was flying through space!”

The word ‘tutored’ starts with ‘two’!

Bargas continued, “She cried for weeks until she couldn’t take it any longer. She killed herself, all because a cocky smart kid wanted to show how smart he was. He brought my wife down to lift himself up.”

Lots of number words! And that wasn’t all. I was starting to remember. Yes, *juppu’wI’*, I was indeed in that cargo hold. I never met the politick, but I knew his wife. Those memories were returning – all those weeks we would sit at this very table. I would show her math formulas, and all that. But I couldn’t think about it - what with all the number words going on! How could I have inflicted so much torture on anyone? Did I really do that? *Va!* It couldn’t have been me.

“Yes,” said Bargas, “If I ever caught that kid, I’d grab me a two by four and show him a thing or two!”

“Nooooo!!!!” I yelled. It was just too much. I had to beam out of there, but it was no use. I blacked out again.

\* \* \*

I was alone in a room when the music began. It was in that same mansion of a cargo hold. Looking out into space, I saw I was on the third floor. It was strange to hear music, and it was getting louder.

Then the song changed and got even louder.

*Inchworm, inchworm,*

“*Qu’vatlh!* Not that one! He knows who I am!! My favorite childhood song turned against me!!”

*Measuring the marigolds,  
You and your arithmetic,*

“Danny Kaye was a Cardassian!!!!”

*You’ll probably go far.*

“Here it comes! I can’t take it!!”

*Two and two are four.*

“*va!!!* The pain!! The pain!!”

*Four and four are eight.*

It was too much! The music was so loud! I tried the doorknob. It was locked.

*Eight and eight are sixteen.*

There was no escape! I dropped to my knees crying boo-hoo-hoo, praying to Bog or God and his Almighty Angels for gracious deliverance, but it was no use!

*Sixteen and sixteen are thirty-two.*

O, the Humanity!! I wanted to die! I wanted to end it all and release myself from this cruel world!

That’s when I noticed the chorus was in an endless loop.

*Two and two are four.  
Four and four are eight.*

.....

Yes, *juppu’wI’*, there was no escaping my destiny. That politick was killing me. It was revenge – all because I killed his wife. Yes, it was me! I tutored her to death! I’m so sorry! I wished I could take it all back. There was only one way out – only one form of retribution.

The door may have been locked, but the window wouldn't stop me. I jumped and broke through the window, rear first. Then I tumbled. O how sweet it was! No more music! No more pain! No more math!!

\* \* \*

I don't know how long I was gone, but as I stand before you today, you can see that I lived. For what seemed the longest time, I dreamt strange dreams. People were doing strange things to my noggin, and I was writing figures on a chalkboard while people stood up around me and cheered me on.

When I finally returned to the real world, I opened my eyes to a full room. I was all wrapped up in casts, lying in this sick bay bed. All these people were standing around me. I recognized one of them: Senator Anthony. Not the one whose wife I killed, but the other one.

He smiled at me. O, *juppu'wI'*, it was a fake smile – just a façade as he was surrounded by his fellow constituencies. He said to me, “Good, good. You're awake. Did you sleep well?”

I wanted to tell him what I really felt – after all he did to me with that chip. But I was like the politick. I could only smile in front of those people and say, “Fine, thank you. Where am I?”

“I fear you have taken quite a fall,” was his reply. “That Senator Bargas turned out to be quite the little murderer, didn't he? Well, don't you worry about him anymore. He's in a place where he can no longer harm you.”

“So, what will become of me now?” I asked, knowing that I still had my terrible life to live. If I couldn't do math, I just wanted to be dead, and they took that away from me.

Anthony smiled again and said, “That's what we intend to find out. Here, look above me and you'll see some lights. Tell me, how many do you see?”

I saw the lights. It was the same array of lights he told me to look at so long ago. Before, I couldn't answer, and I didn't think I could do so now. I started feeling sick as I counted the lights, but it felt different. I had to say it out loud, just to prove once and for all that I could beat the chip within my head. Just once!

I said laboriously, “There ... are ... f ... our ... lights!”

Everyone gasped. I waited for chunks to fly. But nothing happened.

NOTHING HAPPENED!!

Anthony clapped his hands and said, “Well done! It seems the operations have been a success.”

“Operations?” I asked.

“We have removed your math inhibitor chip, and you should be able to do math again.”

*nuq?* Was he serious? After going so long without math, could I really start doing it again? I imagined the possibilities. I could get back to the testiwests and join the Federation! I could date again! But more importantly, I could *wa'*, *cha'*, *wej*, *loS*, *vagh*, *jav*, *Soch*!

O yes, *juppu'wI'*! I could do math again! My eyes rolled back in my head as I imagined the sweet beauty of the integral of “e” to the “x”. O, Great Ecstasy! I was cured, *Qapla'*!

THE END

## ***“A World of Good”***

***by Ben Marshall***

The house lights in the hotel conference center dimmed. A spotlight flitted across the stage, resting finally on the solitary figure at the podium. Her sequined black dress shimmered with fragments of reflected light. She cleared her throat in a not-so-subtle effort to hush the dinner crowd.

“Ladies and gentlemen,” she began, “welcome to the awards segment of our spring 2043 International Actuarial Association meeting here in Geneva....” As she extended welcomes to guests and lavished praises on organizers, an elderly woman shifted slowly in her wheelchair. She struggled momentarily to turn the chair away from the dinner table and toward the stage.

A diminutive young man seated beside her stood to assist. His brown, smooth-skinned hands contrasted starkly against her gnarled white fingers, even in the dim shadows of the stage lights. He turned and locked the chair, then nuzzled his brown nose against her pink cheek. He pushed a wisp of her white hair behind her left ear as she beamed up at him. “*Ah-kuhn*,” she whispered, “thank you, Sokren.” He bowed his head his head in response, hands pressed together in a motion approaching prayer. “I am honored, *yee-ay* Miranda.”

The introductory speech had mercifully droned to an end. “And without further adieu, ladies and gentlemen, I give to you this year’s winner of the IAA’s Enterprise Risk

Management award. For his groundbreaking work in the application of enterprise risk management to the relief of human suffering, this year's award goes to Sokren S. Prath, executive director of Cambodia's 'Preah Vihear Project'!"

The crowd, never known as a raucous group, rose to their feet in polite applause. The brown-skinned young man strode slowly toward the stage. His traditional silk shirt became almost phosphorescent as the spotlight found him. As the crowd continued to clap, the white-haired woman sat in her wheelchair, clutching an old photograph, tears streaming down her face. Her mind drifted back across many years to the beginning of her Southeast Asian journey...

\* \* \* \* \*

"Come on, Miranda – let's go!" prodded her husband. He hurried ahead of her, carrying their bags through the exit doors of Phnom Penh International Airport. "Come *on*, sweetie!" Bill Sinclair had always been a man of action. Dropping the luggage, he hailed the driver of a *tuk-tuk*., a sort of hybrid motorcycle-powered carriage. Meanwhile, the overpowering heat had stopped Miranda in her tracks. Beads of sweat formed on her forehead, nose, upper lip and chin. As Bill negotiated a price with the driver, neither understanding the other's language, Miranda watched her husband with fascination. She raised her digital camera and snapped a photograph.

The picture captured the essence of what Miranda observed. Fine lines etched by time and smiles were just beginning to crease the corners of Bill’s eyes and mouth. Flecks of silver salted his coarse mane of inky-black hair. Miranda felt her heart swell joyfully within her rib cage – twelve years of marriage had done nothing to dampen their torrid affair. “But what have we gotten ourselves into?” she thought. A volunteer assignment with the fledgling Actuaries Without Frontiers had led to a year of preparatory research, a boatload of uncertainty, dozens of well-laid plans, and a pair of one-way EVA Airlines tickets to Cambodia...

\* \* \* \* \*

“It gives me great pleasure and much honor to accept this award,” stated Sokren humbly, clutching the podium. “I have many people to thank – and much to explain...”

\* \* \* \* \*

Miranda licked her ice cream cone as she and Bill sat in the air-conditioned comfort of the upstairs room at the Blue Pumpkin café. “These last three months in Siem Reap have felt like a dream,” declared Miranda, “but time isn’t a renewable resource. You remember that reference you’re always quoting as evidence of actuaries and mortality studies in the Bible?”

“Yep – ‘As for the days of our life, they contain seventy years, or if due to strength, eighty years... So teach us to number our days, that we may present to Thee a heart of wisdom.’ It’s from the last part of Psalm 90,” Bill replied.

“Yeah, that’s it. Sort of like loveable old MacDonald Carey’s words at the beginning of that old TV show: ‘Like sands through the hourglass, so are the days of our lives.’ I’ve been thinking, Bill.”

“Dangerous activity,” he smiled, “Yes?”

“Time really does fly. We need to make the most of the time we have. Especially the time we have here. There’s so much more of a difference to be made.”

“What do you mean?”

“Well, for instance, your micro-insurance assignment with AWF seems a little narrow in scope. Don’t get me wrong – it’s a worthy proposition, and it’s what you’re here to do. I’m not saying you shouldn’t keep working on it. But I don’t think we should limit ourselves to financial work. Other differences are needed just as desperately.”

“Sure, that’s obvious. This country’s been through hell on earth. Just think about the history. There was the butchery and starvation under Pol Pot and the Khmer Rouge in the



1970's. Two decades of civil war filled the 1980's and 1990's. Millions of land mines were left behind, killing and maiming innocent civilians to this day.”

“And then there are the kids,” interrupted Miranda.

“Yep. The country's lack of law enforcement and its relative obscurity gave rise to a prolific child sex trade to start the 21<sup>st</sup> century. Accompanying that was the highest rate of child abandonment in the world. Meanwhile, the AIDS epidemic found its Pacific rim foothold in Khmer culture, leaving thousands of orphans in its wake. The vast majority of the population survives on less than two dollars a day per person. So what sort of difference-making do you have in mind?”

“I'm thinking about the kids – the future of this beautiful country. You've seen how so many of them roam the streets, begging people to buy their little trinkets. You felt like the Pied Piper the first time you bought from them near the temples at Angkor Wat, and droves of them followed you all the way to the car. I think we can do something to make their lives better.”

“Like what?”

“I don't know – *something*. Let's put our minds and hearts to it. You're the one who's always saying that to whom much is entrusted, much is required. We've been entrusted

with certain knowledge, certain experiences, certain abilities. Something is required of us.”

“Yep – you’re right. Gotta say it, no matter how sappy it sounds – you make me a better man than I am by myself. Guess that’s why I fell in love with you. That, or the way you can make a skirt twitch with that little sway of your hips.”

“You’re a bad, bad boy,” she smiled, “I’m going to teach you a lesson when we get back to the hotel.”

“Is that a threat, or a promise?” His grin nearly reached both ears...

\* \* \* \* \*

“First, I’d like to thank my surrogate grandmother, Miranda Sinclair, and her late husband, Bill, who first introduced me to actuarial and risk management principles,” said Sokren somberly, his voice beginning to tremble with emotion...

\* \* \* \* \*

Two years of intense language study and practice had rendered both Miranda and Bill fairly fluent in the spoken Khmer language. Bill wrestled mightily, to little avail, with reading the intricate script of the written language. He had greater success with his

studies of numbers – though in English, not Khmer. Bill had built a database of Cambodian population mortality experience through records obtained since 1998.

“Nothing before that time makes much sense, and much of the data is lost,” he explained to Miranda, “since that was the tail end of the civil wars that followed the Khmer Rouge genocide. It still seems impossible to believe that something like that could happen in modern times. Two to three million killed or starved in less than four years, out of a population of seven million. But one visit to Tuol Sleng prison or the Choeung Ek Killing Fields Memorial is enough to convince anyone that it did indeed happen. The depravity of man rears its ugly head once again!”

“Depraved, or at least fallen, yes – but made in the image of God,” chided Miranda, “Such potential for evil, but such potential for good. There’s a world of good to be done out there.”

“Speaking of which,” Bill said, “I’m thinking of using my mortality studies in a project larger than the AWF micro-insurance assignment. Instead of selling small amounts of insurance for small amounts of premium, I’m thinking we should get charitable donors back home to pay the premium, and raise enough money to cover every household in the country for at least a subsistence level of living when a wage-earner dies. It’s easy enough for me to figure out the pure cost and translate it into terms that donors understand – this many families protected from financial disaster by a contribution as

little as X dollars per month. And by eliminating the distribution system and the need for profit, we can do a world of good at a very reasonable price.”

“It’s the kind of thing that could catch on in underdeveloped countries around the world,” she smiled in reply, “and AWF could help with the charitable fundraising back home. But oversight of the claims system will be crucial. You can’t leave it with the government, at least not here – too much corruption.”

“Yep – I remember seeing those mansions owned by government officials in Phnom Penh. No way that they bought those on a mere government worker’s salary. We need to work on our networking to find people across the country that we can trust for administration of the program. And I’m thinking that we can add to the program later – do the same with disability on down the road. One step at a time...”

“And in the meantime, we have the non-financial project to look forward to,” beamed Miranda, “for the kids...”

\* \* \* \* \*

Sokren composed himself for a moment at the podium. “The two of them also introduced me to more important principles,” he continued. “They never had children of their own. But they have many grandchildren, all across my beloved country. They demonstrated the wisdom of the biblical writer James: ‘Pure and undefiled religion in the sight of our God

and Father is this: to visit orphans and widows in their distress, and to keep oneself unstained by the world.’ Bill and Miranda started a network of Cambodian orphanages, including the one in Tbeng Meanchey where I grew up...”

\* \* \* \* \*

“Direct involvement – yes. But sole responsibility – no. This first experience with the kids has made me realize that it’s not my calling – nor is it what the country needs. Despite the hokey old analogy with the starfish,” grumbled Bill.

“What analogy?” queried Miranda, seated at one of the cafeteria tables, twisting a young Khmer girl’s straight black hair into two sets of braids. A generator-powered fan cascaded a gentle breeze across the screened-in room.

“You know – where the guy is walking along a beach, picking up starfish and throwing them back into the ocean. The beach is covered with starfish. And another guy comes along and says, ‘You’ll never be able to pick up all those starfish. You can’t possibly make a difference.’ And the first guy throws another starfish back into the ocean and says, ‘I made a difference to *that* one!’”

An adolescent Khmer boy sat down at the table on the other side of Miranda. “*Joom ree-up soo-ah*,” she murmured in his direction, “hello, Haing.” She looked back toward her husband. “So what are you saying?”

“That we need to be able to *replicate* and create *sustainability* in what we’ve done with the kids here in Siem Reap. We know how to raise the funding for capital costs and ongoing support for an orphanage; we can identify and select the kids in need; we know how to set up educational programs to supplement what they get in school, and to reach out to the surrounding community; we understand many of their emotional and spiritual needs – but we can’t be the only ones throwing the starfish back into the ocean.”

“So what do you propose?”

“That we bring others into the fray – a small, dedicated cadre of starfish-throwers, who in turn teach others to become starfish-throwers. It ties straight back into recent Cambodian history. The Khmer Rouge devastated the country by targeting the leaders for execution. The country has never fully recovered. We need to identify and teach young adults who can become leaders. Not just leaders of orphanages, but leaders for society.”

“And how do we find them?”

“We already have a lot of contacts, and we keep on networking to find more, just like we did to find claims administrators for the wildly successful charitable insurance venture with AWF.”

“And how do we get them to throw starfish?”

“We spend time with them, building their intellectual, emotional and spiritual DNA – just like we do with the kids here at ‘Haven of Grace,’ who will eventually become leaders in their own right. And *we* learn from *them* at the same time, just like with the kids. But the reality is, we’ll need to hire many of the young adults – good will doesn’t put food on the table. Some of them might become house parents, starting here with ‘Haven of Grace’ and spreading throughout the country as we start new orphanages. But principled leaders are needed in other arenas – *especially* the government...”

\* \* \* \* \*

“My organization’s methods are not without precedent,” intoned Sokren solemnly, “it is their application that is somewhat unprecedented.” The old woman leaned toward the stage and adjusted her hearing aid. An uncomfortable silence filled the crowded room. “As *Ta* Bill was fond of saying, ‘*Understanding* the risk is not sufficient; *acting* on it is the moral imperative.’ Nowhere is this truer than in the risk exposures giving rise to human suffering...”

\* \* \* \* \*

Shredded cardboard was strewn across the main table in the “Haven of Grace at Tbeng Meanchey” educational building. A glint of late evening sunlight cast long shadows across the room. The building’s lone occupant was hunched over a set of instructions

written in English. The various contents of the demolished box were lined up on the table in front of him. He turned his graying head as the door opened.

“Bill, what sort of contraption is that?” asked Miranda. The boy at her side walked toward the table. “*Joom ree-up soo-ah,*” smiled Bill, “hello, Sokren. Hey, Miranda!”

“I asked you a question, Bill,” she scolded good-naturedly.

“It’s a bio-sand filter. Originally developed by a fellow named David Manz. An old church buddy of mine introduced me to him by email. Dr. Manz co-founded a group in western Canada calling themselves the Centre for Affordable Water and Sanitation Technology, or CAWST for short. They’ve been around since the turn of the 21<sup>st</sup> century.”

“And you, being the wise, not-so-young man that you are, recognize the need for affordable water and sanitation technology in a remote place like Tbeg Meanchey.”

“Something like that. It’s going to be the next global crisis.”

“Water?”

“Yep. Oil shortages are nothing in comparison. With all the environmental shortcuts that poorer countries take in fostering development, their supplies of clean, fresh water will



become virtually non-existent if nothing is done about it. Disease and death follow close behind. And my mortality studies become useless artifacts for their intended purpose.”

“So what’s one bio-sand filter going to do?”

“You’re wanting to hear the starfish analogy again?”

“No. I’m figuring my brilliant hubby has a grander plan.”

“Why do you smirk when you say that?” teased Bill. The boy sitting beside him smiled silently in response. Bill continued, “As a matter of fact, my dear bride, I’m taking a very close look at the technology, and trying to figure out a way to replicate it with everyday materials available here in Cambodia. I’ll then check back with Dr. Manz to see if it holds water – no pun intended.”

Miranda noticed that his boyish grin momentarily erased years from his facial features.

“And then what?” she queried.

“If successful, we can show the construction and use of them to the house parents at each of the ‘Haven of Grace’ centers, and to all of the leaders-in-training under the umbrella of our ‘Preah Vihear Project.’ They can host classes for the surrounding villages. Like Joe Namath’s girlfriends on the old Breck shampoo commercials – ‘they tell two friends, and

they tell two friends, and so on, and so on, and so on.’ It just seeps across the country – again, no pun intended.”

This last comment earned him a well-placed jab of Miranda’s elbow into his mid-section. He wrapped his arms around her, trapping the renegade elbow, and placed a tender peck on her pink, sunburned cheek. Young Sokren turned away in flushed embarrassment.

\* \* \* \* \*

“Risk management is not just about correlation matrices and copulas,” continued Sokren, his voice beginning to rise with passion. “Diversification of risk can only go so far. When the remaining risk profile is still unacceptable, something further must be done. In the case of financial risks, that ‘something’ may involve hedging strategies. For insurance claims risks, it may involve reinsurance techniques. For the risks associated with systemic poverty and disease, the solution involves investment in human capital. That is what the Preah Vihear Project is all about – identifying key societal risk exposures and training leaders to take action to mitigate them ...”

\* \* \* \* \*

“Hospitals – and knowledgeable people to staff them,” Bill uttered through a hacking cough. He rolled over on the mat that he and Miranda shared as a bed. She sat beside

him, mopping his forehead with a moist cloth. Sokren stood next to her, holding a bucket of clean water, the product of a Cambodian-made bio-sand filter.

“Save your strength, dear,” whispered Miranda.

“Yes, *Ta* Bill,” added a teen-aged Sokren, “please.”

“Just a minute – let me speak what’s on my mind. This isn’t about me or my illness. It’s about the future of the ‘Preah Vihear Project.’”

“What do you want to say, dear?”

“They need not be Harvard or Yale graduates. Just sensible people with basic training in the key health risk exposures of the region – how to avoid them, and how to treat them. What do you think, Sokren?”

“I think you are a wise man, *Ta* Bill.”

Bill’s eyes moved from Sokren to Miranda. “You remember the quote from the Psalms?” he rasped, pausing briefly to cough again. “It’s the heart of wisdom that matters – not the number of years.”

“Fifty-eight is too few,” she replied quietly, gazing at him tenderly through misty eyes.

\* \* \* \* \*

“This approach is not transactional in nature,” exclaimed Sokren. Many in the hotel crowd were now beginning to fidget. Sokren’s speech was noticeably over the time allotted on the program agenda. But Miranda sat listening in rapt attention, adjusting her hearing aid volume as Sokren’s voice reached peaks and valleys, her mind straying back and forth between the past and the present.

“It is not a matter of purchasing options on the trading floor, or entering into a reinsurance agreement with the stroke of a pen,” Sokren continued, “it is an investment in people, and it is measured in months, in years, in decades...”

\* \* \* \* \*

“Are you going to return home now that Bill is gone?” asked Sophaly. She had become a good friend and confidante to Miranda during their nationwide bio-sand filter campaign.

“This *is* home, Sophaly – at least here on earth. Some day I’ll join Bill in our eternal home. But I’m here in Cambodia to stay for now. Bill’s body will be buried just outside the grounds of our first ‘Haven of Grace’ center in Siem Reap, and I’ll be laid to rest beside him when my work on earth is done.”

“And where will you stay in the meantime?”

“I’ll go where I’m needed – teaching, and continuing to learn. Bill’s and my vision for the ‘Preah Vihear Project’ was based on sustainability and replication from the start. He was so happy to see young Khmer leaders – like *you* – rising to meet the challenge.”

Going, teaching, learning – that was exactly what Miranda had done for the better part of the next fifteen years. Among the young leaders that flourished under her tutelage was Sokren Prath. Sokren completed a degree in mathematics, and several years later qualified as a Fellow of the fledgling Cambodian Actuarial Society. He became one of its leaders, and successfully lobbied for its membership in the International Actuarial Association. And even before Miranda’s peripheral polyneuropathy confined her to a wheelchair, she had turned over the helm of the ‘Preah Vihear Project’ to Sokren.

He had built well on the foundation that Miranda and Bill had laid. He engaged other Khmer leaders to address a host of societal risk exposures facing Cambodia. He had even expanded the organization’s influence beyond the boundaries of Cambodia, speaking at various lecture series hosted by other developing nations and writing for international journals. The practical application of risk management principles to ease human suffering began to spread like dandelion seeds in the wind.

And then, earlier this year, he had received the invitation to attend the IAA meeting in Geneva as a nominee for the Enterprise Risk Management award. He had immediately arranged to bring Miranda with him...

\* \* \* \* \*

“And, finally, my fellow actuaries,” concluded Sokren, “let me encourage you with these words. Your discipline can be used for more than your tradition dictates. It can be used to do a world of good. But you must be guided by your *heart* as well as your *mind*. Thank you, and good night.” With that, Sokren ambled off the stage, polite applause from the dinner guests accompanying him.

The house lights came up slowly. As Sokren reached his table, Miranda smiled up at him. “I’m so proud of you, Sokren,” she gushed, “Bill would be, too.” She noticed a tear forming in the corner of Sokren’s eye. She reached out to touch his arm.

Suddenly, she could no longer clearly see his face. His countenance seemed a mere blur. She felt a tingling sensation in her left arm, her left leg, her face. Her jaw began to clench. She no longer saw Sokren’s face, but Bill’s.

Sokren saw Miranda begin to slump in her wheelchair. He knelt down and took her in his arms. “*Yee-ay* Miranda, what’s the matter?” he asked frantically.

“The... wisdom of the heart... that matters,” she slurred, “not... the number... of years...” She smiled at Sokren once again, her hand in his – and then her hand was stilled.

It was time to go home.

## ACTUARIAL PALINDROMES

By Jerry Tuttle, FCAS, CPCU

A group was gathered around the company coffee machine as Michelle ran in breathlessly. “I have some big news,” she announced. “Tina just gave me her letter of resignation. She is quitting and joining Rich in his new company.”

“Well, you know what that means,” I quipped. “Tina’s leaving will simultaneously raise the average hotness quotient of the women in both our companies,” I said with a smirk.

Some of the group almost smiled, but others scrunched their faces in confusion at that statement. Even if you didn’t know us, it was easy to figure out who are the actuaries and who are not.

I am Nick Palluci, an actuary, in fact one of the senior actuaries of Penn Re. Rich Olson had been the chief underwriter, and he left to become president of a new company, Jersey Re. No one was surprised when he took Andy Fletcher, the number two underwriter, with him, to start the underwriting department. But people expected he would take an actuary with him to become his third employee. Nobody thought he would take Tina Long, a somewhat junior computer person, as the third employee. She seemed a little too inexperienced to run an entire computer department. But she was cute and quirky in sort of a Sarah Palin way.

At Tina’s farewell party, we tried to grill her on what her responsibilities would be at Jersey Re. Would she really be in charge of Rich’s computer department? Tina explained that Jersey Re was part of a larger organization that would share a number of services, including computer services; Tina’s new job was solely to produce Rich and Andy’s management reports. The group toasted Tina and wished her luck in her new position, and Tina, who is not a big drinker, let it slip that she was getting a big raise to join Rich.

Months went by, and Rich and Andy started to put business on their books. It became clear that they were not going to hire an actuary any time soon. Penn and Jersey are both property-casualty broker reinsurance companies. Unlike primary companies that insure people and businesses directly, a reinsurance company insures insurance companies. A reinsurance company does not file rates with the insurance department, so actuaries are not needed for that. Furthermore, the broker system means that reinsurance companies get their business from reinsurance brokers and only take a percentage of each deal, with each reinsurer getting the same rate. So a company without actuaries like Jersey Re can let another company, like ours, do the actuarial analysis on each deal, and take a percentage of the deals we take at the same rate. Since actuaries can be pretty expensive, this seemed like a reasonable strategy for a start-up company like Jersey Re.



During the busy January 1 renewal season, Jersey Re did not appear to be handicapped at all by the lack of an actuary. They got shares of a number of deals that we were on, which ordinarily wouldn't bother us, except often this meant Penn had to accept a reduced percentage so that Jersey could get in on the deal. Interestingly, they did not get on any deals that Penn had looked at and decided not to do. Jersey Re would never offer the initial rate quote to the market – without an actuary it was unlikely that they would do so – but they would make their independent decision on the final rate.

Rich and Andy had worked so long at Penn that they certainly knew our appetite for deals and the way we would decide whether or not to do a deal. They had also been the major decision makers for much of the business Penn had written for years. I had spent many hours with Rich and Andy explaining Penn's actuarial pricing models as well. So even without an actuary, it seemed plausible that Jersey Re would write pretty similar business to what Penn wrote.

As it got closer to January 1 when all the decisions have to be made, I found myself working longer and longer hours. As I worked late into the night, the office was quieter, I had fewer co-workers interrupting me, and the network response time to my otherwise long recalculations of some monster spreadsheets even improved, with hardly anyone else on the system.

One morning in the coffee room I ran into Michelle, and I asked if she had heard from Tina since she left. "Yes, I saw her at a computer conference," Michelle replied. "She seems to be doing pretty well. Based on the Chanel suit she was wearing, I think she is doing a little too well. I think she is being paid more than I am," Michelle said with some jealousy. I winced at that remark, knowing many of us at Penn feel we are underpaid and could probably earn more elsewhere.

That evening while I was working late at night to get a quote ready for the next morning, I opened a spreadsheet file and got a strange error message: "File is locked for editing by Nick. Click Notify to open a read-only copy and receive notification when the document is no longer in use." That was strange for two reasons. First, this meant someone else was currently working with that same file – which seemed unlikely at that hour. Second, the message implied that the someone else was me! "Dammit, I'm mad," I thought to myself. The message quickly disappeared, and I dismissed it as one of the system's many quirks. I knew if I called the help desk, they would tell me to turn the computer off, reboot, and see if the problem goes away – similar to the advice I imagined they would give me if my car had a flat tire – start the car up again and see if that problem goes away.

But this odd error message bothered me, so the next day I told Michelle about it. She asked if I had been logged onto a second computer at the same time. Years ago people did this, she explained, because personal computer memory was limited and this was a way to get around the limitation. I reminded her that as a senior actuary I had been given the maximum possible amount of computer memory, so there was no need to log on to a second machine.

Later that day Michelle telephoned me. “Nick, you were mistaken. The computer records show you were logged on the company computer twice yesterday. The first time was on your desktop which you have been on continuously for weeks, and while you were still logged on from your desktop, you logged on again at 9:02 p.m. remotely. You logged into your account, from your token, with your password; all three of these need to happen to get into the system remotely. You must have opened the same file twice, so you got the message that the file was already in use. Then you logged off a couple of minutes later.”

“Oh, that’s right, I forgot. Thanks, Michelle,” I replied and hung up. But her theory was wrong. I hadn’t logged on remotely last night. In fact I haven’t used the remote capability for months.

I unzipped my key case. There was my security token, with the six digit number that changes every thirty seconds. I stared hypnotically at the blinking dot. I was thinking about who might know my password and the way my data directories were arranged.

Kevin, one of the underwriters, suddenly poked his head into my office and pulled me back into reality. “Nick, when are you going to be ready to talk about the actuarial numbers on the Kingston account?” he asked.

“Data, et al, up in a min; I manipulate a tad,” I replied automatically, pleased with myself for such a clever reply. Kevin looked at me blankly. “Don’t you get it – it’s an actuarial palindrome – it’s the same forwards and backwards!” This is why there is a love-hate relationship between actuaries and underwriters – they just don’t get us!

“No, actually, there are a lot of new claims this year, they’re pretty large, and it’s taking me longer to finish than I thought,” I explained. “Can it wait until tomorrow?”

“OK, but please have it by tomorrow morning. The broker said he needs an answer first thing tomorrow. Remember, this is our biggest account. And no doubt Rich and Jersey Re are going to want a piece of it.”

“I understand, Kevin, and you’ll have my numbers and recommendation first thing tomorrow morning. Even if I have to work all night,” I promised.

Kevin left my office, and I knew what I had to do.

Again, I worked late that night. Since this was such an important account, I made a duplicate copy of my data files just to be safe. The original copy was in my usual data directory, Kingston, but contrary to what I always do, I put a backup in a new directory, Notsgnik.

The new claims were going to be a problem. I decided I wanted to see the effect of the analysis with and without the new claims, and so I made separate files for this. I put the analysis without the new claims in the Kingston directory, and I put the analysis with the new claims in the Notsgnik directory. The effect was enormous. I decided we would

need to increase our rate 20% in order to renew the Kingston deal, and the last thing I did that evening was to write a quick memo explaining the +20%, which I also put in the Notsgnik directory.

Kevin and I met the next morning. We went over my analysis, and I explained my calculations. If it weren't for these new claims, I would have recommended reducing our rate 15%; unfortunately, the new claims changed everything. Reluctantly, Kevin agreed to offer a quote of +20%.

Kevin made the call and did the talking, but I was in his office listening on the speakerphone. The broker was absolutely horrified at our quote. Didn't we realize how much money we had made on this account over the years? The broker claimed he could get this deal done at the expiring rate, and maybe even a rate decrease. The broker threatened to take us off the deal and replace us with Jersey Re.

"Well, do what you have to do," said Kevin, "but we are not renewing unless we get +20%."

The deal did get done later that day at a 10% rate decrease. Penn declined to renew at this price, and Jersey Re did take our percentage share. I smiled slightly, as I thought about how Jersey might have come to its conclusion. I jiggled my keys in my pocket. I reminded myself I should ask Michelle to replace my security token. I also thought about Sarah Palin – I still think she is cute.

END

Notes:

The palindrome "Data, et al up in a min; I manipulate a tad" is used with permission of its original author.

The pseudoword "Notsgnik" is not really a palindrome, but is more of a semordnilap.

# Brinley's Bet

## By Eric Clapprod

"How much?" the dealer asked, with a face as if he'd just been punched.

"Two billion." She pressed the stud in her ear and said, "Hold on," to whoever was on the other end. Her index finger then pointed back to the dealer, who looked an awful lot like Archie Bunker in those old shows her great-grandfather used to make her watch as a kid. "Okay?" The index finger was painted with the fashionable sparkle of skinpaint – purple and red swirls that ran along every other finger and down to her wrist - that flickered under the black light and neon flashes of the casino.

"No," the dealer said, "not okay. You've got a credit line of—"

"Check the line," she said, and sipped the last of the orange fluid from her glass.

"Want another?" asked a bearded man with a Moscow Nights baseball hat on behind her.

"Yea sure," she said, before turning to see a small crowd forming. "It's a—"

"Orandom," the guy in the hat said. He turned proudly to the woman next to him and added, "She *invented* it. Orange juice, brandy, caffeine and one of those neurostimulators. Then she figured out how to make it taste good." The hat guy was Middle Eastern, the beard was clean-trimmed, and he had skinpaint on just his left pinky, a pattern she recognized as the Turkish flag. "This," the guy said to what now seemed to be a small audience of fellow g'estors, "is *Brinley Roth*."

"Wow," said the dealer, viewing a hologram off the pencil-shaped tool behind his ear, "you got the credit."

"I know." Brinley sat down and tapped back into the stud. "It's a go," she said.

"Sixty seconds!" the dealer barked, sparking motion around the table. The seats had all been taken and the three assistant dealers were receiving light signals from several g'estors replicating Brinley's bet. "Sixty seconds till close on the FX-Temp."

"You are *wonderful!*" said a middle-aged woman sitting to Brinley's right in an Eastern European accent as she reached out and squeezed Brinley's forearm, seemingly for good luck. Then, "Have you talked with your father?" Brinley tried to somehow wave the comment off without being rude, which was like trying to nicely throw someone out of your house. "Oh," the woman said, "I'm sorry to pry."

The drink came to the hat guy, who used its arrival to step in between the woman and Brinley at the table and hand her the orange stuff. "I'm Garad," he said. Brinley politely shook his hand and raised her glass to his. Her freckled, pale face remained fairly

emotionless though, her thin lips touching the rim of the glass and watching the board as it ticked down. “How did you-“

Brinley raised a painted finger to halt her new friend and tapped into the stud again. “Go now,” she said.

“Did you just *short out*?” Garad asked.

“Well...” She watched the clock tick down until the time-to-bet expired and then said, “Well, yes.”

Garad smiled and shook his head in disbelief. “So, you just got all these people to bet your way because of who you are, and then you had someone on another exchange short it out after the price ran up?”

“No, I shorted half,” she said. “Otherwise all I’d be doing is playing off my own name.”

“So you’re only *half* playing off your own name.”

“My name,” she said, “has impact on the market. I can’t ignore that.”

“Let me ask you-“

“Who do you write for?” Garad raised his eyebrows and feigned confusion. “Yes, it’s obvious,” she said. “I also recognize your face. I think you’re with the New Capitalist.”

“Do you have a photographic memory?” The crowd noise increased. The board showed her call was looking good. If the temperature in London fell a fifth of a degree and the Asian Union currency ticked up one more tenth of a percent versus the South American Unit in the next two minutes minutes, they would all see a fifteen to thirty percent return on their money over the span of five minutes. “Alright, you got me,” Garad said. “So can I ask some questions?”

Brinley shrugged. She had a slight but athletic frame and wore a fashionable, fitting purple business suit that went well with her skinpaint. Straight, short, dirty-blond hair fell over her eyebrows and was brushed back now and then by her long nails. “It’s all been written. I assume you’ve read it all, maybe written it all.”

“You claimed there was a flaw in the Universal Economic Data report you were involved in producing. You were convicted of intentionally disrupting markets by talking to the media about the ‘problem’ with the UED without permission, killing confidence and profiting from the market fall. You served twelve months instead of three because you ran from marshals and led them on a chase for three weeks. You’re still on probation. It said, ‘Smartest Woman on Earth’ under your picture in *Rolling Stone*. You spend your time often on oddball jobs and inventing weird stuff like rockets kids can launch, literally, into the sun, alcoholic drinks and a light-weight snow shovel.”

The crowd cheered again. With a little over a minute left, the temperature in London had just fallen a fifth of a degree. "Some people still shovel snow," she shrugged.

"Why Morocco?" Garad asked. "Why here? Of all the places you could be. Harvard. Wall Street. That think tank in Sydney. Why hang out in this bizarre bazaar? These gambler/investors, the *g'estors*, they are mostly drunks and drop-outs."

"I'm a drop-out," Brinley said. "Some would say a drunk, too."

"Where did you drop out of?"

"I majored in statistics at Stanford. I couldn't get it."

"How do you not get it? Is this like how Einstein failed high school math?"

"There's something wrong with it all. It's all off a little. I can't explain it."

"The math is wrong?"

"The math is wrong." She sipped the Orandum. "By a *little* bit."

"Where did you get the two billion of credit from?"

"Just now? I have companies I work with."

"What makes you invent a beverage and then work at a ski resort and then take a job at an insurance company?"

She shrugged. "Something new."

"Are you a trillionaire?" Her eyes rolled. "You're said to be."

"No."

Garad looked up at the board. The currency had moved to where it needed to be. The crowd around them began to count down. *Ten....nine...eight...*

When the bet ended the group around the table went wild and Brinley accepted congratulations all around. Her blue eyes scanned the crowd back and forth several times before she zeroed in on two men in suits about sixty feet away.

"Great job," said Garad. "Unbelievable."

"Thanks." She took the drink and stood. "It's been fun."

“Can I walk with you?”

“Sure.” She headed toward the exit and turned to see the suited men walking in the same direction.

“You just made two billion.” Garad maneuvered around people as Brinley cut through the crowd. “Is there something still wrong with the UED?”

“Who knows.” Brinley walked out of the casino room and into a larger, open hallway with the illusion of gold coins falling from the sky and smashing into sparkling bits on the ground all around them.

“What about your father?” asked Garad. Her walk seemed to pick up immediately. She turned around the image of a waterfall and looked back, through him somehow, to the men in suits. “Is someone following us?” Garad looked behind him and then turned back just in time to see her step into a chute. The airstream brought her up two flights. She moved smoothly across a casino floor that projected the image of New York’s Central Park. Garad had to jog to catch up to her. When she paused behind a sculpture of Rudy Giuliani and looked back into the crowd, Garad said, “You had a falling-out with your father. There’s a famous tape of him at your mother’s deathbed before he left her, saying he would ‘*do anything for Suzanne*’ and crying before he left her.”

Brinley rolled her eyes and pointed her painted digit again at him. “Are you seriously going to ask me about this?” Then, “Dammit.” The suited guys walked toward them briskly as she shot through the crowd.

“Yes,” Garad said, “I am asking you about this. You never do interviews. I may never see you again.” She took a quick turn and exited through a doorway that said *Employees Only* above it. “Wait!” Garad tried to keep up. She was suddenly jaunting down the stairs. “Why are we running?”

“You want to help me?” She hopped five steps at a time and tossed the drink to the side.

”Yes, I think!” Garad was huffing. The glass smashed on a stair and his shoe landed on part of it. “This is exciting but...what’s...happening?” Behind them the door slammed and footsteps could be heard.

“Turn and stop those guys!” she yelled.

“What?” She cut into a doorway and he followed her into the parking garage.

“You’re not helping!” she shouted behind her.

“Who are they?” he yelled back. He then had to sprint, breaking into a mad sweat, to keep up with her as she raced down the length of skyers. He heard the door slam behind them and feet pounding as quickly as theirs. “Hey...mine....is right over here...”

Brinley turned her head but didn't slow down. "Where?"

"Here..." He pointed. "Green...Alvotec X4...over...there." His hand then went to a cramp on his side. She spotted the skyer and cut towards its direction.

"What's the code?" she shouted.

"I'll fly," he said.

"No!" she yelled.

"It's secured...Only...I...can fly it."

"Fine!" She ran to the passenger's side of the skyer and motioned like a football coach to get him to run faster.

"Ok...ok..." As Garad got to his vehicle and opened it he turned to see the two men running. He and Brinley hopped into the skyer, he quickly activated it and it shot ahead toward the exit. "Who are they?" he asked her, looking in the rear-view mirror.

"GG's."

"Global government is still after you? I thought you were just on probation and--"

"Go south!" she shouted as they flew out of the Morocco Maze casino. To someone on the other side of Casablanca looking eastward at the 200-story gold-and-green helix-shaped building, the green flyer would have looked like a speck, one of hundreds resembling fleas buzzing around the 40<sup>th</sup> floor where the flyers parked.

"Ok..." Garad flew south, nervously watching for sky traffic..

"No idea why they are after me," she said. "I just don't want to go back to jail."

"Understood." Garad turned to her. "So, you have no idea who Suzanne is?"

"Why does anyone *care*?"

"Your father was a Nobel-winning psychiatrist. You're a world-famous economist. You became a cult sensation when that video showed him telling your mother he was devoted to another woman."

Brinley shook her head. "I haven't spoken with him and I don't talk about this."

"Not at all?" Garad shifted the alt gauge and they suddenly shot upwards.



“What’re you doing?” she shouted.

“They’re right behind us!”

Brinley turned and tried to get a view. “They are?” By the time she turned back around, the flyer moved directly up and into a sunporter.

“What *are* you doing?” she repeated, then unbuckled herself and looked around frantically as the blimp-sized sunbus absorbed them and closed its shell beneath. Garad’s skyer was now inside a steel chamber the sunbusses used for long trips to get people and their skyers from one continent to another. He sat at the controls and stared blankly at Brinley, who tried in vein to open her door. “Unlock, let me out!”

“Sorry,” he said, as a sunporter door opened and four armed marshals moved toward the skyer. “We’re inside a GG sunbus.”

“You have to be kidding me.”

Garad unlocked the skyer and a marshals opened her door. “Step on out, Ma’am.”

“What *is* this?” she turned back to Garad.

“I’m really sorry,” he said. “I get the inside story for helping them get you. Please don’t hate me. They were going to get you anyway. This saved three weeks of taxpayer dollars chasing you through Pakistan and Botswana.”

Brinley jumped out and allowed the marshals to cuff her hands behind her back. “Don’t mess up my skinpaint,” she said.

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Rako del Hethruin was a large African-American man in his fifties – twice Brinley’s age – with a square jaw, half-gray hair and words impeccably pronounced with the bass force of two decades in the military and two in the government’s economics departments, including stints from Congressional testimony to academic speeches. He was her former boss’s boss and now he sipped an Orandom in his office, which overlooked the Java Sea from its perch atop one of Singapore’s highest buildings.

“That has alcohol in it,” Brinley said.

“I know.” He set it down. “I thought I’d try it though. It’s almost quitting time.”

”When I worked here,” she said, “we never quit.” It came out a little more meaningfully than she’d intended. She adjusted herself in the seat, still getting acquainted to not being handcuffed for the first time in ninety minutes.

“This,” he said, holding the glass, “is an olive branch.”

She had rejected a cup of her own beverage earlier in favor of a water, which she now held up as a gesture. “First kidnap, then olive branch.”

“Not a kidnapping,” Rako said. They were alone in the room, which was spacious and featured a ceiling view-projection of a perfect blue sky. “The GGs have you for several counts of probation violation.” She didn’t react. “You are supposed to stay away from firms that do business with the government’s economics teams. That’s in the judge’s orders. Some of the businesses that have provided you credit lines are owned by firms that have government contracts.”

“They’ve all signed docs,” she said, “that show there’s no conflict of interest. I’m pretty careful about my tracks.”

“I think we have enough to haul you back,” he said. “Plus you’re not supposed to be slamming the economic reports.”

“Yea, I love that one. Apparently if you speak enough truth you lose your First Amendment rights.”

Rako smiled at the American reference. “You mean the Fourth Axiom.”

“So you agree you took away my right to free speech,” she replied snappily, “however low its rank may have fallen.”

“Your economic role was a *privilege*,” Rako said. “You know how important psychology is. Less than a hundred people, out of twenty-three billion, had access to what you did. You can’t have a hundred economic advisors blogging.”

“Why am I *here*?” she shot.

“We want your help.” He paused. “You were *right*.” She could not prevent her spine from straightening. “Something was wrong.” He pulled out a copy of the Global Times article that started it all, and tossed it on the desk. Although she’d memorized her own thesis, she scanned her own words again, now knowing they were true.

*There are six planetary systems in the Universal Trade Network. Four of the economies are Earth-like - single planets. Mostly, the information coming from these systems is very tangible, comforting, non-foreign. The economics across the universe have proven much more predictable than most would have guessed decades ago before contact was made with alien economies...*

“So,” she said, “what is it? A flaw in the calc’s? A mis-code?”

Raku shook his head. “No. As it turns out, it’s hard to simulate an interplanetary economy.”

*...To report on the economics of the six systems, however, is not at all like reporting on the economies of six continents. Even with quark technology, it takes months for the data to travel back and forth. There are cultural differences. Translation problems. And, yes, moral issues. It took centuries for humans to trust each other – some would say we still don’t – and yet we put faith in the reporting standards of various economic reports coming from the Tutri on Y-65 and the famous Centauri Ceeds and their proton production plants. Investing in the Ceeds’ currency, for instance, is making a bet that their science is right and that we Earthlings have had proton-modeling wrong all this time. This is what the market believes, clearly, but scientists have still not come to that conclusion here on our planet...*

“When you say simulate...?”

Raku’s head tilted and a small, empathetic smile came to his lips as his eyes closed just a bit. The expression was similar to how he might look if he was telling her that her cat was, in fact, dead. “I mean, make up.” Her eyes slightly widened. “It’s all programmed. By a different team. The team...” He laughed and then shrugged as if to say he couldn’t believe he was laughing. “The team you probably *should have* been on to begin with, if it weren’t for the fact that your psych profile said you wouldn’t have approved.”

“Approved...of the entire fabrication of universal economic data?” He nodded. “Yea. Okay. So what you’re saying is that some people....You...The President...Apparently a whole ‘team’...They were okay with it.” She waved off his attempted interruption. “Their profile said ‘green light’ to this.”

“Listen. The alternative was disaster.”

*...The data is not possible. This is why I’ve quit the UED team and gone public. It is not a question of randomness and guesswork. I’ve shown that, mathematically, the numbers my department is reporting for interplanetary trade are not possible. I don’t know what is behind it, but my superiors have, gradually, told me in louder and louder voices, to shut up and do my job. But this is my job. To understand the universal economy...*

“The alternative to lying,” he said, “was global depression. Famine. Kids, adults, everyone dying and suffering at a greater pace than anyone could imagine.”

“You know what?” Brinley sat forward. “Can I get a drink now?”

“Orandom?” Raku connected to his assistant thru his earpiece.

“I don’t suppose you have beer.”

“What kind?”

“Give me a Budweiser.”

”My guest would like a Bud,” Raku said. “Yes. A bottle of Bud. Just bring her a beer.”

“When,” Brinley asked, “exactly, did this famine and depression rear its head and get beaten down by economic lies?”

“About 2130.”

She shook her head as if to get water out. “*Thirty years ago?*” Raku nodded and then held a hand up to stop her from continuing as his assistant entered. The man handed Brinley an ice-cold bottle of Budweiser. She thanked him and watched him walk out, then said, “That was right around the start of the UED. It was manipulated from the get-go?”

“*Made up* from the start.”

“What’s the difference between manipulated and made up?” His silent gaze was confusing at first, before she realized it was supposed to *come* to her. And when it did, she stood up. She wasn’t sure but she may have actually come off the ground, her feet and all. She put the beer on the desk and leaned over toward Raku. “Are there even other economies *out* there?!” Her hand pointed toward the sky.

Raku stood, almost defensively, to back away from her, and walked toward the window to gaze at the sea. “I’m sure there are. There must be, right?”

She followed him toward the glass wall. “Are there economies out there we *know* anything about? Do we *trade* with *any* extraterrestrials at all?”

They stood against the glass. She stared at him as he took in a deep breath and slowly sighed. “No.”

“But...But the aliens are real?”

He actually laughed. “Yes. Yes, we’ve never faked an alien existing.”

“What’s so goddamn funny? That we would make that up too?” She took a swig of the beer and spun angrily around, then walked toward the door, not sure what to do. Brinley Roth would typically smash the bottle against the wall and walk out. She remembered suddenly that she’s been brought here in handcuffs.

“Brinley, we fed people the extraterrestrial trade theory to get them going, to motivate them. It was all....You know.”

”What?”

“Psychology.”

A good minute of silence went by. Raku leaned against the glass wall and went from staring at the water to watching Brinley’s actions. She slowly orbited the desk, then arced toward him. He was letting her, again, figure it out. “Was my father...involved?”

Raku nodded. “Ryce Roth,” he said, as if narrating a documentary, “the most genius psychologist of all.” Her eyes rolled. “I know how you feel about him. But he saved the world.”

“Oh Jesus.”

“Your father designed the profile to choose who joined the simulation team. He personally made the call that you were not appropriate for it.” Raku finished off his orange drink and sat on the edge of his desk. “It started, though, a few years before you were born. The economy...You know this better than anyone – it is an amazing thing. How can society progress for millions of years and then nearly bring itself to destruction over money? The reports say it’s a recession...everyone backs off of investing. People lose their jobs. It’s self-fulfilling. Then it’s a depression. We remember that we never actually fixed those diseases and the food-distribution problem. We never invented time travel or floating cities or ways to control the weather. The environment costs so much to maintain now because of everything we screwed up before. It all came down to one thing in 2130: How do we get people to believe?”

She shook her head. “At the top levels of government, with those calling the shots for mankind, it’s really no different than a goddamn Santa Claus movie.”

“If they believe, they invest. They go back to work.”

”There was no other choice?”

”In two days it was predicted the South American army would liquidate and skyrates would capture much of their weapons. The skyrates had already taken over hundreds of sunports. We sent every idea we had to the president and the one we began to use was growth driven extra-terrestrially. That was an idea from a young, brilliant psychiatrist named Ryce Roth. Three years later there was an UED traders relied on to incorporate other solar systems into our economy.”

“So for thirty years everyone’s been investing in other planets’ productions of protons and all this other made-up technology because you can simulate how one planet’s exports might increase or decrease in value with another’s.”

“It’s all phony. Everyone knows there’s very little physical trade that can get here.”

“Does *any* of it ever get here?”

“Materials come, we tweak them and deliver them to the aero-tech companies. Enough to keep them thinking there’s actually robust trade out there.”

“How often do we shute to Centauri?”

“We go exactly as the media reports – a few times a year to each system – but there’s no trade network.”

Her face was disgusted. “Do you realize what would happen if this got out? If you thought famine and disaster were awaiting in 2130 without the UED, imagine what happens now. Imagine what happens in 2182 when we tell everyone-“

“We can’t tell them. That’s why we brought you in. We need to fix it.”

“Fix it?”

“Yes. I wouldn’t be telling you it’s all a farce unless it was broken. You discovered that. We have ran the system out over future years and it is going to become more and more obvious something’s wrong. We’ve ran billions of scenarios and...well...We can’t avoid the numbers getting out of control.”

“Sure.” She stared at the ground, pacing, thinking. “At its core there’s no intergalactic economy.”

“We had a lot of smart people saying this could go on forever. We’ve ran infinite-math simulations that showed we could fake this forever.”

“But you were wrong. Economists are going to see inconsistencies in the data sooner or later. Is that what you’re saying?”

“We made a crucial mistake.”

Her face faked astonishment as she held up her fingers in the form of quotes and said, “Ooops!” Raku shook his head and accepted the sarcasm he knew well from her.

“Namely, we never arbitrated our own system.”

She sat on a ledge near the window and thought for a bit. Then, “If you profited from the knowledge of what the economy was going to do, you could develop enough government wealth, secretly, to offset any economic downturn.”

Raku pulled out a report and handed it to her. “The details are all in there. You’ll figure it out in no time. But at this pace, one of a few things will likely happen in our reports. Either the currency of U-616 goes negative within two years-“

“What does that mean? Goes negative?”

“Exactly. Or, the value of investing in the Tutri planet becomes infinitely attractive in about fifteen months and that’s the only thing people invest in.”

“A product that doesn’t exist.” Brinley opened the report, whose cover page said simply, “UED Immediate,” and began to scan through it. “How did this happen?”

Raku held his hand out to her. “You know how impossible it is to fake data. We are faking five sixths of all the data in the ‘universe.’ We got caught up in...some math thing.”

“*Some math thing.* Great.”

“We brought your father back.”

“For the love of Christ, Raku.”

“He was at that think-tank in Sydney. Now he’s downstairs.” She shook her head the way someone with too much new information would. “We need you team up with him. Help us develop a giant economic reserve and shock the system back to something that won’t self-destruct.”

“So all this time, it never occurred to you to arb your own system.”

“Some *individuals* have arb’d it. Sixteen people at any given time know the UED is false. Over the years eighty-one people have been on that sixteen-person team. Of them, eleven have tried to exploit it.”

“And...”

“They were all killed immediately.”

She nodded. Paused. Then said, “Am I getting out of this alive?”

“Yes,” he said immediately. “We never tried to earn the government a profit before, for many reasons. We thought it would kill the integrity of the system.” She rolled her eyes. “We thought it would motive people who knew, motivate them the wrong way. And we were so amazed at what we were actually doing, we spent all our time just trying to keep the earth from finding out or blowing itself up financially.”

Brinley finished her beer and sat down. “I haven’t worked with my father in more than ten years.”

“I know.” Raku walked over to her and squatted down next to her chair. “Will you do this?”

“I have just one request.” He nodded. She circled a word on her own report and showed it to him.

Raku’s eyebrows raised. “What...*you*?” She nodded. “You’re serious?”

“Yes.”

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Ryce Roth had replaced his legs with titanium-rexon mechanics. Each artificial leg was a series of five metallic ovals that moved in tandem with each other. He’d become six and a half feet tall – eight inches more than natural. He suffered from one of the rare diseases that still had no hope for cure. Brinley knew from media reports that his health was being blamed on psychic drugs he’d been experimenting with for decades as part of his research. Even after he “quit” psychiatry he was still dedicated to neuroscience.

“My brain is half-fried,” he said. “But I’ve carefully avoided disturbing the parts of my mind that contain the most useful information for humanity. The psychiatric work I’ve done remains.” He tapped a part of his frontal lobe. “Ask me what year the Middle Ages ended and I have no idea.” He laughed. Alone. She sat, fairly motionless, staring at her father. They were in one of the penthouses of the Singapore headquarters for the UED. Food and drink had been brought for them and several assistants were setting up personal tech centers for their use and asking what data they needed, over and over.

“Let’s just get this done,” she said.

“Brinley.” His hand waved across his body as if to call a time-out. “We’re going to have to *connect*. You and I. For this to work.”

She laughed an odd type of laugh she didn’t think had ever come out of her before. “Ironic, isn’t it? You’re the world’s reigning psychiatry expert and you can’t connect with your daughter.”

He nodded. “And now we need to save the world, Sweetie.” She noticed he had jet-black skinpaint on every other finger. He started chuckling again.

“What now?” she asked. “Or have you become so insane that you just laugh at yourself all day?”

“Do you remember,” he asked, “when we went to Hawaii with your mother?”



“Of course.”

“You were about eleven.”

”Ten.”

“We rented a small, old-fashioned boat with an outboard motor and I messed something up, the engine flooded. We were only a few hundred feet off-shore.”

“Yea. We paddled the boat in.”

“Remember? The three of us were exhausted when we got it to shore. Your mother had kept saying she wanted to call the Coast Guard.” Brinley laughed, a true one. Her mother had been the most cautious woman on the planet. “But by the time we got to the sand-“

”She realized her phone had fallen into the ocean while she was paddling.”

Ryce laughed out loud. “She was so mad at me,” he said. “Then we walked around a little and couldn’t find ‘civilization.’ “

“Even though there was a mini-mall right over the ridge.”

“Right. We panicked. Your mother was yelling at me until we all sat back down again on the beach to figure out what to do.”

“You pulled out a cupcake from your pocket.”

“The only food we had.” He choked on his own laughter. “Remember what you said when I handed you the cupcake?”

“Yea.” She nodded. “I think I said, ‘This is quite ridiculous.’ “

“That made your mother laugh.” Ryce shook his head and looked out the window, where the sun was setting. “Well, Sweetie.” He held out his hands to gesture toward their current situation. “*This* is quite ridiculous, isn’t it?” Her smile faded as she nodded. Ryce reached into his pocket and pulled out a small card, handing it to her.

“What’s this?” She looked down and saw that it was a birth certificate. SUZANNE ROTH, it said. The birth date was hers. She looked back up at him. “Wh...”

“Do you remember changing your name?” She frowned and tried to reach into her memory. “You were four. You were an unreal child. You would get these thoughts in your head. You came to us one day and said you wanted to change your name to

Brinley.” His hands went into the air with a shrug. “You said you wanted something new.”

“Jesus, Dad.” She dropped the certificate on the table. “ ‘Suzanne’ is me? Why didn’t you tell me?”

He smiled. “When this whole video thing happened and you hated me...It was when you were becoming so educated, so smart...I had been scared to death that if you and I were close, you would find out about the false UED. I was petrified that they would kill you.” A tear fell from her eye. “And suddenly, you hated me. You hated me for something I didn’t do, but that was better than you being at risk.”

She cried for a minute, silently, her face in her hands. Then she looked up with red eyes at her father and asked, “Are the surprises for the day over?”

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There were only six of them in the room, awaiting the President. Brinley, Ryce, Raku, the technical director of the UED, the President’s chief of staff and his chief economic advisor. She was only five minutes late, and when she entered, they all stood.

“Relax,” President Li said. She shook hands with the UED guests and asked them to sit. “I’m sorry I don’t have a lot of time.” She was eighty-five years old, an elegantly-aged Japanese woman who still moved sprightly and spoke clearly in six languages. “I want to personally thank you all, though, for the work you’ve done. We have a four hundred quadrillion dollar reserve that the planet is unaware of. Our estimates show that we can withstand any economic scenario for the next thirty years.” She paused. “Brinley, I know you want to ask me what happens *then*.”

“No,” Brinley said. “I’m fine.”

President Li smiled. “We have thirty years to figure it out.”

“Not Brinley,” said Raku. The president frowned. “She’s headed to Centauri.”

“Really?” The president nodded with a mix of admiration and concern.

“For a few years,” Brinley said. “I’ll come home.”

“But to her,” Raku said, “the next thirty years will seem like three, due to her high-speed travel.”

President Li leaned forward. “We’re not asking you to do this so that you can remain young in case we need you, are we?”

“No,” Brinley said. “Going to Centauri was my idea. My one condition to Raku.”

“It should be fascinating,” said President Li.

“Yes,” Brinley said. “Something new.”

When the president left they were escorted to their flyers. Raku shook Brinley’s hand and then turned to Ryce. “Did you get approved?”

“Yes,” he said.

Brinley frowned. Raku explained, “Your father’s being cryogenized.”

Ryce nodded. “I want to be here when you get back.”

“Dad,” she said, “there’s about a twenty percent chance you don’t get revived with that technology.”

“I know.” He reached out to her. “I’ll take that bet.”

She took his hand and their fingers locked, her purple and red skinpaint intertwined with his jet-black.

## **Introduction**

About 2 years ago, an acquaintance of mine was paralyzed in an accident at work. It was a shock to all of us who knew him. We asked, "How could this happen?"

On a different, less personal level, when the financial crisis seemingly fell upon us in 2008, the reaction was similar: shock. How did this happen?

When I saw the invitation to write a story for the actuarial Speculative Fiction Contest, these occurrences came together in my mind. What better example of an actuary of the future than someone with a CERA, the newest and perhaps most forward-looking actuarial credential, who had come to terms with a devastating personal contingent event? Such a person would have a perspective of risk management that is necessary to deal with the risks of our modern world.

Take that, coupled with my own spiritual perspective of the nature of our existence here, that we chose to come here knowing the risks, and that is the inspiration of the story that follows.

I hope to never experience anything like what my acquaintance went and continues to go through. Despite that, writing this story helped to provide some perspective concerning such troubling events, and I do hope you find it as compelling to read as I found it to conceive and write.

Michael O'Reilly, FSA, MAAA

## Chance Happeneth to All By Michael O'Reilly

Was it a black swan? A random event so rare that all we could hope to do was to mitigate, to diversify? Or was it something, with the right reporting, the right warning measures, we might have anticipated? Sort of like those beacons in the middle of the ocean to send an early alert of an oncoming tsunami. A tsunami, all right! The Dow down 20% in just over 1 week. With financial accounting standards requiring write downs of the assets on our balance sheet, it was as though we were a gambler and the bookie had called in our marker. How could we not have seen this coming? Looking back, the ground work for this was laid in changes to financial regulations as early as the 1970's and 80's and thousands of decisions large and small made by financial institutions and real estate speculators and even by individual home owners. But was it really that clear? As a Chartered Enterprise Risk Analyst, with my knowledge of managing risk, I felt that we should have diversified more to reduce the impact of this. But frankly, I also felt we should have seen the warning signs more clearly—they were there after all.

Those thoughts were running through my mind as I walked quickly home through the hallways of our corporate headquarters. It had been a long day of frustration and of accusations of incompetence. How could this have happened? How could we have not prepared for this? What do we do now? And going forward, how do we manage for such risk in the future, if there is a future? Those were the questions everyone was working on. The CFO had said "Now is the time, the time when our financial knowledge, our ability to analyze and respond to risk, is needed and will be pushed to the limit. Now is *our* time." I knew he was right and this was a time to step up to the challenge, but at the same time it was frightening, ... and overwhelming.

All I remember next was something pushing my head toward the floor. Then pain, excruciating pain. Then nothing.

My next awareness was being in a hospital bed. I had an IV in my arm and what seemed like tens of cords connected to me. My back was sore. I was alone. And within a few seconds I realized that I could not turn to relieve the pain. I could not move my legs! I panicked. I called out. If I had had the strength I'm sure it would have come out as a scream, but I think it probably was barely audible.

Yet he came, in green scrubs, and that ever-present smile. I would come to view him as my guardian angel in the coming weeks. "You're finally awake ... Good morning". This calmed me down a bit. "Help ... Can't move." Still smiling, he said "That's right. That's something you'll have to get used to. Let me help you get more comfortable". *Something I'll have to get used to? What did that mean?*

Well, what it meant was that I had broken T3, a bone in my upper back, injuring my spinal cord and the nerves that allowed me to use my legs. I would never be able to walk. Ever. I would never be able to walk again.

As far as I've been able to reconstruct, this is what happened while I was pondering how risk management might have better prepared for the disastrous financial collapse. I was walking

down the hallway in our corporate headquarters, a place I felt safe and in control, and I had not noticed the moving crew. I had not noticed the moving crew moving large lateral files on dollies. I had not taken precautions. I was lost in my own thoughts, and I had turned toward the elevators, just in front of one of these lateral files. The worker had stopped short, but lost control of his cargo, and it had come crashing down on me. My head rushed to the floor under the weight. Then pain, then darkness.

Two weeks of darkness. T3 was broken and along with it, any hope I had of moving my legs. Of running, playing basketball, swimming. Of even walking again in a park or up a mountain or even down the hallway in corporate headquarters. I had no hope of using anything below my waist, of having children.

Somehow though, Cole, the nurse in the green scrubs and the annoying smile, got me through those next 5 weeks of pain and anguish. I was bitter. At times I was bitter even toward him. *Easy for you to smile and be encouraging*, I would think as he played cheer leader while the physical therapist tortured me. *You can walk. You have a beautiful wife and children. You are living your dream while mine is lost. You are living my dream while mine is lost.*

Cole almost got me through the inevitable stages. Denial. *This couldn't have happened.* But, of course, it was hard to deny my legs not moving. Rage. *How could this have happened? I manage risk, I'm not the victim of it! How could I not have been more careful? Couldn't they have been more careful?* Discouragement. *I'll never be able get into that chair. I'll never be able to achieve any of my goals.* Acceptance. Cole consistently sought this from me. "You can still do your work." "It's like planning a trip to Hawaii but ending up stuck in California. It's still a wonderful place just different than where you were planning to be." That infuriating smile. *Maybe he was right.* Maybe I didn't see the warning signs, maybe I didn't manage the risk, but maybe I could, now, make the best of a bad situation.

My pace of physical progress matched my pace of psychological progress. I developed my upper body, I learned how to navigate to the wheel chair and back to bed. "Ordeal" does not begin to describe the incremental improvements I made. My first trips were just to roll to the window of my room. I'd watch people walking outside, construction workers repairing the roof on a wing of the building across from my room, people doing things I'd never be able to do. After more physical therapy and coaxing from Cole and practice, eventually I started to venture outside my room using the wheel chair.

These small trips were like adventures whereas before they would have just been walks down the hall. I met other staff and other patients. I discovered I was not alone in this process. I discovered the building was situated overlooking a river, really a beautiful view. My room faced at an angle away from the river, but on my small trips I found views of it. I even discovered an elevator that went to the roof they were repairing. The elevator must have been set to allow easy access for the construction workers. I was riding it, and it opened up, and there it was, a beautiful view of the river valley, lined with the bright red of the last of the fall foliage. The cool air felt good against my face, and then a construction worker walked onto the elevator and the door closed, now a wall blocking the beauty beyond.

I was told that I would be able to go home for the holidays. The thought horrified me. But Cole said they would arrange for a visiting nurse to assist me with the transition. A delay in the paperwork resulted in me “getting” to spend Thanksgiving weekend in the hospital rehabilitation center. There’s nothing like a hospital turkey dinner to lift the spirits. I suppose even then I was thankful to be alive and for Cole’s support, but I certainly wasn’t joyful or festive. I put on a good front.

The Friday after Thanksgiving, they started decorating for Christmas. That Saturday afternoon, a group of children from a local church would be coming by to provide an early Christmas concert. I even helped decorate a small Christmas tree near the nurses’ station. It gave me something to do, and it reminded me that I was grateful that my hands still worked.

The children walked into the center. We were already assembled, waiting for them. The children looked somewhat unsure at the sight of all of us in our various states of being repaired. But their leader cheered them on and as soon as they started to sing, their smiles came on. They really were marvelous--all that Christmas joy and all the potential of youth.

As I watched them, I thought of what these children had to look forward to. I sat there thinking. All I could do was sit. I would never stand. I would never run and play with children. I would never have children like the ones in front of me. Heck, I’d never be attractive enough to someone to even get married. All those dreams, what, in reality, I had worked for, had evaporated. My work was evaluating and mitigating risk, even, in my mind, controlling it. One chance occurrence, being in the wrong place at the wrong time, had crushed me, and my dreams.

As the concert was ending and the children filed out, I had the overwhelming feeling I had to get away from there. I had to get anywhere. If I could only walk, or better, run and get away. I rolled down the hallways in search of what, I didn’t know. I found myself in the elevator that went to the roof. If I could just get some fresh air, a sense of escape. Surprisingly the elevator took me to the roof even though there were no construction workers there on Saturday. I hesitantly rolled out onto the roof. It was cold. But it felt good to be outside.

I sat there in the chilled air and I stared out at the river. It was a relief to be away from everyone, from people celebrating. If I could just get away from the thoughts in my mind: *I’ll never marry. I’ll never have children. I’ll never walk holding hands. I’ll never play with my kids. What is the point of going on?*

I sat there and stared out at the running river alone with my miserable thoughts. I sat there and stared and then ... I noticed that there was a path between the pallets of building materials on the roof, a path big enough for a wheel chair. And beyond the path, was a place where the border wall around the roof had been removed, I suppose, to make it easier for the crane to swing the pallets onto the roof. That was the way I could get away from my thoughts... that would end this unacceptable outcome.

“How could you even consider that?” I looked up. A nurse in white scrubs was standing beside me.

“What?” I coughed, my voice full of phlegm. I realized I had been crying.

“You accepted the plan. You knew that things like this could happen.”

*Plan?*, I thought. “What are you talking about?”, I asked, totally bewildered.

“The plan, to come here, to have the ability to make choices, to be subject to random events.”, he said.

“To be subject to random events?”

“Yes. It’s actually amazing, the career you’ve chosen despite having no memory of your role. You helped design the random event generator.”

*Random event generator?* “You mean a scenario tester?”, I asked.

“No, I mean random event generator. The point is, it is not the nature of the events, it is how you react to them. You still have many options, many good choices you can make, much good you can do. Do not throw it away. Do not throw yourself away because you feel sorry for yourself, because of some random accident.”

I looked back at the path through the pallets and thought, *that wouldn’t have been an accident.* “How did you know?” I looked up and he wasn’t there. I turned the chair around. He wasn’t anywhere in sight.

I hadn’t seen that nurse before, nor have I seen him since. But his words to me, his interruption of my thoughts, my plan of action, was a turning point. I got back on the elevator and I went back to my room. That Monday I did go home. After two weeks to adjust, I went back to work part-time, a few hours to start. I found that the tools that I needed most for evaluating risk, my mind and my eyes and my hands, worked just fine. In fact, my appreciation for risk, my understanding of its reality, was perhaps even deeper than before. And that December, I celebrated Christmas.

I’ve celebrated Christmas every year since then, through the ups and downs, during times when every indicator pointed toward an eventuality that didn’t occur, and when all the models had it right. I got married. I found that I could have kids, just not in the way that I had planned. And it has been, well, wonderful.

During our first Christmas together, my wife introduced me to the movie *It’s a Wonderful Life*. It caused me to reflect on that night, on the roof, my turning point. I don’t know if that nurse was just an incredibly insightful mortal. Or if he was an angel like Clarence in the movie, and he knew me so well he could anticipate my actions. Regardless, in those few moments, those few words, he helped me recognize some things about the nature of risk, and the nature of my existence... That I chose to come here, that I knew there would be risks and yes, negative outcomes. I recognized that what mattered was not only preparing for such negative outcomes, mitigating the risk, but moving forward from even the worst unexpected event. I’ve been fortunate and I am grateful for the chances I’ve had and, yes, even for those I haven’t had.

The End



## “From The Smallest Of All Creatures”

by

Efrem L. Epstein

It was 2:11 when Emmet looked at his watch. A limp smile forced itself over his stressed face. "Would you believe we still wear watches in the year 2237," he thought to himself.

Emmet had faced many challenges in his 268 years, but none anywhere near as daunting and terrifying as the one a mere 19 minutes in his future. At 2:30 PM he would be arguing in front of The Supreme Court of The United States, in effect to save his mother's life.

“Time moves so much faster now than it used to,” Emmet thought. It was unclear whether this perspective was due to his old age or to the fact that time did seem to move faster in the 23<sup>rd</sup> Century. He knew all along that his mother's case would grip him in an emotional hold like no other, but he hadn't realized how much it would also force him to focus on his own pending mortality.

The Eternal Humanity Law had been passed by Congress on May 3, 2172. It read as follows:

“All citizens, upon attaining the age of 300, shall have their lives terminated in an honorable manner which preserves the dignity of life and humanity. In the event that the citizen is deemed unable to afford a proper burial, one shall be provided for them at the cost of the federal government.”

Once upon a time that piece of legislation had made so much sense in Emmet's mind and he had even taken the time to contact his elected officials and encourage their affirmative vote a mere 65 years ago. The amendment was seen by many as a last-ditch effort to restore sanity to the world. A real crisis had emerged from 22<sup>nd</sup> Century Technology: It worked a little too well! Not only were all major diseases eradicated, but advances had allowed each person to “save and back-up” both their internal and external organs, including their brains. Hence, if one got hit by a car or fell off The Empire State Building, their next of kin merely typed a few keys, pressed a few buttons and...VOILA! Their loved one was back.

As exciting as this development might have seemed to someone living in previous times, it did not take long for society to realize that eternal life was not the utopia that one might have envisioned. Many struggled to find meaning in their existence. Happiness, excitement and senses of purpose were diminishing and seemed destined to ultimately become extinct. Life was ultimately becoming like the video game you could rig so as to

never lose...it was becoming stale real fast. Philosophers were noting that we had in fact ceased to be human and now were part-machine. We could no longer in good faith categorize ourselves as animal, for in fact we were mineral. The solution to the problem was simple: The Eternal Humanity Law (TEHL).

Shortly thereafter, virtually every other nation had followed suit and quite a few had set the termination age at lower than 300. France, ever-obsessed with youth, had shocked the rest of The UN when it passed its own ordinance capping national lifespan at 160 and prompting a major immigration to The Western Hemisphere. Ironically, one such immigrant, Jean Marchant, was now one of The United States Supreme Court Justices before whom Emmet would be pleading his case.

Technically a few countries, such as Micronesia, had no law forbidding immortality but moving there created a different host of problems. Life in those countries tended to be less technologically advanced which meant less comfortable, less pleasant and on top of everything else, dangerous. The computing in said nations was nowhere near the levels of America and so there was always a chance that the personal back-ups might be corrupted or even erased. Hence, moving to escape mortality might end up getting you killed anyway and it would be an undignified death with one's last days spent alone and probably unhappy. For if one left The United States to evade termination they could never return and their kin risked eternal banishment as well if they tried to visit their termination-evading relative.

The first seeds of TEHL were planted by a niche lobby: Life Actuaries. As a group, they were among those hurt the most by technological advances since life insurance was now expendable. The amendment was their chance to reclaim the prestige and riches they once enjoyed. The irony that humans would sacrifice immortality for wealth was not lost on philosophers, sociologists and clergy. Support for the amendment gained serious momentum when the life actuaries were joined by, well...philosophers, sociologists and clergy. Once strange bedfellows, these eclectic constituencies now united as a coalition with a common goal: To bring meaning back to life and to rebrand human beings as human once again.

Now 65 years later, Emmet found himself on the verge of being orphaned. His mother was less than seven weeks away from her 300<sup>th</sup> Birthday. He had lost his father over two centuries earlier and he envisioned that the pain would be exponentially greater this time. On many days he probably could still argue the merits of TEHL but right now none of that mattered. This was personal and it was a good thing that he realized that fact because just as the larger picture was trumped by his own small world, so would his own world be trumped by those of the nine judges before whom he would be arguing in a moment that was drawing hauntingly closer.

He pulled out a picture of his mother, closed his eyes and took a deep breath. It was she that had chosen his name. Emmet was both from the Old English word for ant and from

the Biblical Hebrew word for truth. “The ant is revered because of its resilience in spite of its size,” his mother was fond of saying. “Sometimes the greatest truths emanate from the smallest of all creatures.”

As he exhaled, he clung to the image painted by his mother’s words. His task was enormous but he would be resilient and his words would be authentic and come directly from his soul. He would remain true to himself and that is what his mother wanted more than anything else in the world. He held back the tears as he concluded that thought in his head, “more than anything else in the world...perhaps even more than her own immortality.”

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“All rise!”

The nine justices filtered into their seats one-by-one. Emmet made eye contact with Chief Justice Stephanie Kessenich, a one-time colleague but outspoken advocate of TEHL. “What type of movie will this resemble?” he thought. Will it be the Disney feel-good ending where alls well that ends well? Or will it be the Academy Award winning drama with the nuanced, realistic and often dark conclusion? He swallowed one last glass of water and felt the chill enter his veins. “Be true...Be Emmet,” he thought.

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“We’ve read your brief counselor and now we’d like to hear directly from you,” opened Chief Justice Kessenich. “We’re sympathetic to your plight and your mother sounds like a wonderful human being. However you are aware that you are asking us to strike down a law, which is to say the least, well-ingrained in our society. A law, I’ll add, that I believe serves a very strong purpose in our country and people-kind as a whole. So I’ll ask you a direct question, why should we even consider striking down The Eternal Humanity Law?”

Emmet took a deep breath. “Your honors, the passage of TEHL was one of the boldest, and perhaps proudest, moments in the history of humanity. We proclaimed loudly that we were willing to sacrifice our own individual immortality in order to preserve happiness and meaning for our collective essence and for the well-being of those yet to come into this world. We were disillusioned with what we had become and were even more fearful of what we were yet to be. What was the point of eternal life, if the life itself had no meaning? TEHL was seen by virtually all, including myself, as being necessary to preserve what we once were and to make us human once again.”

Emmet sensed momentum as he continued. “Many a philosopher and sociologist from past millennia would have shaken their head in disbelief and awe if they had learned of that great day in 2172. Their reaction would have likely been one of uniform cynicism.

‘From the beginning of time, every generation has sought eternal youth and immortality,’ they would claim. ‘And now when it is finally achieved, humanity just gives it up so everyone else can be happy? No way would we ever behave in such a selfless manner...NO WAY!!

“But we were selfless, and today I would offer up to the court that we were selfless to a fault. Moreover, as much as our cause was noble its end-result was not. Once upon a time I was rather moved by the argument that The Eternal Humanity Law would make us more human, insure that we remain animal, rather than transform into mineral but what we have become is the opposite of human. We have become angels of death and, in effect, killers....”

At this moment Emmet sensed the wincing of several justices. This had been anticipated and in a way it made him confident that his script was right on target.

“As harsh as it sounds, TEHL amounts to murder. Now I am not suggesting that-”

“Counselor,” Justice Kessenich intoned, “I for one am finding your line of argument a bit disconcerting, not to mention non-analogous and irrelevant. And if you are attempting to draw parallels to the death penalty, I suggest, for your mother’s sake, that you proceed with caution. Many of us were justices when the death penalty was still an issue and a fair number of us upheld its practice.”

“Your honor’s candor is noted and appreciated,” Emmet continued. “For millennia, society debated the morality and value of the death penalty,” he continued. “The debates were complex, nuanced and uncomfortable, especially in this great complex, nuanced nation. But even the strongest detractors of the death penalty would have conceded that the arguments for its existence at that time were stronger than the argument for TEHL is now. The death penalty, many argued, prevented future deaths from taking place. I do not wish to defend said position today, but I will argue that the minute possibility that such an argument was valid is enough to have made its existence less monstrous than that of TEHL. In the passing of TEHL-”

“You will probably find no one on the bench more sympathetic to your plea than I,” interrupted Justice Marchant. “As you know, I fled France to escape being age-retired at 160. I am most grateful to this country for my extended life, as is my family. Yet, every day I grapple with an immeasurable amount of guilt knowing that many humans far greater than I did not live to see their third century, a gift enjoyed by you and I...a gift for which I am most unworthy. As much as I would like to retire, I continue to sit on the bench because I feel a special obligation to serve humanity. An obligation to serve the country that allowed me to be here today and an obligation to honor the memories of those who are not with us today by promoting justice and good will.

“Counselor, as I listen to your argument I am torn on many levels. Let us pretend that your basic premise is 100% valid, that TEHL is not humane. If we were to overturn TEHL...then what could we possibly say to the families of those who have had their lives terminated since 2172. Is it fair to them?”

Emmet had anticipated an objection along these lines, largely because he had struggled with this very issue himself. “Your honors,” he began, “I am not sure I can answer your question, because at age 268, I am not sure I know what is fair anymore. Is it fair that Justice Marchant sits on The Supreme Court, while many born after him are terminated in France? Is it fair that, as recently as 150 years ago, millions of parents annually had to endure the most painful exercise of burying their children? Is it fair that I am fighting for my mother to see her 300<sup>th</sup> birthday, when my father did not see 70?”

Emmet felt his throat tighten. “We were on our way to Copenhagen, when his heart gave out right over the Atlantic. Had we been on land, he likely would have survived. Is that fair? Had he survived that heart attack, he might have lived to benefit from the advances that led to my mother living to see her 299<sup>th</sup> birthday. Had a junior reporter from The New York Times not written an overblown, exaggeratory piece on Copenhagen that for some reason made an unexplained impression on my father he wouldn’t have even been on the plane at that moment! IS THAT FAIR????!!!”

“Counselor, the court advises you to remember WHERE you are standing!” said Justice Chet Zimmerman in a rather rebuking tone.

“Aww...c’mon Zimmerman...give me a break!” thought Emmet. But in actuality, he was partially grateful to the justice for calling him out. He had allowed emotions to grab control over his argument and, if he hadn’t been interrupted, he might have veered off on an irrelevant rant for several minutes and exhausted valuable time.

“I apologize to the court and hope to use the rest of our precious time together in a wise and productive manner,” he uttered in a humble, yet assertive tone. “To answer Justice Marchant’s question in many ways it isn’t fair, just as it isn’t fair that regardless of the outcome of this hearing, I still will never see my father again.” (Emmet’s subtle, hopefully internal Messianistic streak was pounding his subconscious to add the word ‘probably,’ but somehow he managed to hold his tongue).

“But my father would have expected me to fight for every other child to know their father as long as possible...forever if they could. An eye for an eye may be a fair system, but it is not a just system and certainly not what we would consider humane.”

Justice Schwartzman cleared his throat. In addition to being a JD, Justice Abe Schwartzman was also an ordained Rabbi. Conservatives loved him because he was a religious man who knew scripture well. Liberals loved him, because he was meticulous in his enforcing the separation of church and state.

“I find it most interesting that you cite a verse from Exodus as an example of something that you believe is both fair and unjust,” said Justice Schwartzman. “Indeed we should not use ancient religious texts as either precedent or counter-precedent for our decisions. Nevertheless, since this case hit our docket, I have often thought about the verse in Genesis 6, the very verse that appeared in the initial brochures for TEHL where it indicates that it is God’s will that man should only live until 120. Now leaving God as much out of the equation as possible, isn’t there something unnatural about extending human life indefinitely?”

Emmet hoped that his poker-face was hiding his excitement. Privately he could not have been more thrilled at the door that had just been cracked open for him. “Actually, your honor, you may be aware that many of the most revered Biblical Scholars do not interpret that verse in the manner you describe. Many believe that the Lord was suggesting that humanity had only 120 additional years until Noah’s Flood. One thing is certain, if one takes the Bible literally-and if one doesn’t this side-point is moot anyway-then people continue to live past the age of 120 even after your cited verse of Genesis 6:3.

“Ten generations after Noah, Abraham lives until 175. In the 11th generation, Isaac lives to see 180. Even if, IF, one wished to use The Bible as a measuring stick for what is natural, it would hardly be supportive of us instituting an absolute terminal age for humanity.

“Your honors, in the end I would submit that your support for TEHL is driven by one motivating factor alone...fear. Fear of life without death, fear that life will become meaningless, fear that humans will cease to be, well human. I understand and empathize, for it was not long ago that I harbored these same fears. But our collective fears are unfounded.

“When I was young, growing up in the early 1970s my parents were horrified if I spent more than an hour each day watching television. My situation was not unique, many parents were of that mindset. The reasoning changed by the month...television was bad for eyes...our ears...affected schoolwork....deprived us of well-needed exercise. Each argument was valid on paper, but none went to the real reason. The truth was that our parents were absolutely terrified of their children growing up with television. Nothing, it seemed to them, had the potential to change life as we knew it since the advent of the wheel. Would children ever play stickball in the street again? Read for pleasure? Study for intellectual curiosity? What would happen to a society when an inanimate object appeared to be far more entertaining than 1,000 humans? Would the sky indeed fall?

“But a funny thing happened on the way. We adapted! Yes, television became a growing part of a culture, but it wasn’t the end of the world. People continued to interact, people continued to be active. Some even argue that the competition of the television challenged us to find deeper alternatives. Just as we were beginning to get over our phobia of the big bad television set, a new great threat to humanity emerged. The Internet! While many were fascinated with the novelty, others predicted the end of

civilization. Would we ever go outside again, now that we could get anything we ever wanted from without ever leaving our living rooms. To think, we once thought the brick-and-mortar store to be doomed, but in 2237 who would ever be so gauche as to make a purchase of any sort by personal or mobile device.” A burst of laughter roared throughout the room. Emmet was on a roll, his concern now was to remain on track and ride the momentum without becoming overconfident.

“Back when I was growing up, one of the most exciting parts of life was when you reconnected with someone whom you hadn’t seen in years. Sometimes it didn’t even matter how well you had known the person, it was the idea that you were seeing someone that you thought was forever in your past and now, all of a sudden and out of nowhere, they were back in your life. It made you believe that anything was possible.” He noticed a couple of the justices nodding in agreement. “With the exception of Chief Justice Kessenich, I am not sure if any of you are old enough to remember Facebook, an early 21<sup>st</sup> Century utility designed to help people stay in touch. Many were enthusiastically addicted to the device, but initially I was not enamored. Most of all I was concerned that Facebook would kill this great joy of reconnecting with souls from your past. I envisioned a world where my children would never lose touch with anybody, so they would never know that one-of-a-kind feeling of regaining touch with old friends.

“But the truth was I was simply being narcissistic. My children may have never known the great surprise of unexpectedly running into a friend they hadn’t seen in 20 years but their relationships have known other joys and surprises, some I never could have fathomed. My fear of Facebook was rather silly and unfounded. In whatever way it might have been a threat to the deeper essences of love and friendship, we, the human race, adjusted.” Emmet paused for dramatic effect. “And so for our fears that eternal life will end humanity as we know it, I also say that our fears are unfounded.

“Humanity will evolve, because even when it seems like we won’t, we always do. Do you realize that in the years preceding the passage of TEHL, when life was effectively unending, none, repeat, none of the major world religions ceased to exist?! Now if religion can survive in a period of eternal life then I think we can feel confident that this brave new world will have ample room and opportunity for meaning and purpose. Everyone will still have a niche, even the life actuaries. Each day will still bring its own nuances, surprises and challenges. Yes, in some ways life will change, but in others it will remain as beautiful as ever. By the way, I think I know why religion remained fluid in this period. It is because most creeds envision religion surviving and thriving in the afterlife and that is what in effect what we can be creating here. Starting today, heaven CAN be a place on earth!

“To those who have never believed in a higher power, I urge you to simply let nature take its course. Our world has evolved to accommodate far greater changes without the sky falling and I highly doubt that the overturning of TEHL will result in cirrus clouds at our ankles. But I also believe that if I am wrong, that that the natural world will evolve to compensate and if eternal life is not compatible with our universe, then the universe will

set a limit on its own terms. In that case, let the limit be dictated by nature and not by overzealous humans!”

The room was silent. Emmet glanced over at Justice Marchant who now appeared to be overwhelmed by awe. Emmet had won over the left-wing of the court! Now it was time to speak to the hearts of the right.

“You know, I have a vivid memory of our Nation’s Bicentennial,” he spoke in a slow, soft voice that matched the reminiscing tone of his words. “Sunday, July 4, 1976, I was all of seven years old. We began the day by watching the morning’s festivities on television. At one point, I started to leave the room but my mother urged me to stay and ‘take it in’ since I probably wouldn’t be alive in 2076 and, even if I were, I almost definitely would not be in any shape to enjoy the celebration on any great level. So I listened to my mother and soaked up every moment of the Bicentennial I could. I even made a point of sampling each of the special ‘once-in-a-lifetime’ Baskin-Robbins Flavors created for that summer: Valley Forge Fudge, Minuteman Mint, Concord Grape and Yankee Doodle Strudel. Heck, I even considered sending a note to the Baskin Robbins Web Site in 2009 when it appeared that they had erroneously omitted Concord Grape from their list of retired flavors and listed Stars’ n Stripes as a Bicentennial Flavor, though I thought it had not been created until sometime after July 1976.

“It was actually when I started thinking about our forthcoming quincentennial that my personal views on TEHL began to evolve. Seeing as we’ve already begun the planning and the hype 39 years prior, it is going to be something that everyone would wish to see and, if TEHL is still in effect, I will have been terminated seven years prior. My gut reaction was of sincere hope that TEHL would have been long overturned, but almost immediately I began to wonder if that was really what I wanted. After all, what had made The Bicentennial so special was the knowledge that I might never see anything of its kind again. Would the day have been so memorable if I had known that I would be around for our nation’s 300<sup>th</sup>, 400<sup>th</sup>, 1000<sup>th</sup>, 1,000,000<sup>th</sup> Birthday?

“Indefinite and infinity can be disturbing words, largely because they seem to render smaller numbers meaningless. But as I stated earlier, we can simultaneously live life in heaven while living it one day at a time. We can also have faith that if overturning TEHL is destructive, it will be altered by nature or a higher power. Some believe that Messianic Times will begin in 2240...a mere three years from now. I offer no opinion on these claims other than to point out that none of these believers are worried about that outcome. They all see eternal life as a blessing and perhaps that is how we should see it as well? A blessing and a gift that our ancestors would have never thrown away and, if they can see us now, might be crying at the sight that we are doing that every day that TEHL is on the books.

While Emmet’s face appeared calm, his body was shaking and covered with perspiration. He felt like a pitcher who was strike away from his team wining The World Series.

“Your honors, in the end it comes down to faith. Faith that eternal life will be a life that is worth living. Faith that our 500<sup>th</sup> Birthdays will still be worth celebrating. Faith that



infinity will not render smaller numbers insignificant. Faith that throughout it all we will still be human beings who laugh, cry, hurt and love. Faith that if this model really is not meant to work, that nature or a higher power will make the adjustment. In this case, this adjustment should not be made by human beings. If ever there was a time to heed the words written by Francis Scott Key, 423 years ago in the charmed city of Baltimore, Maryland...that time is now: 'And this be our Motto---"In God is our Trust."

Checkmate! Now it was the right-wing of the court that was in awe. He quickly thanked the justices for their time and for the opportunity to stand before them. It would be several weeks before the official verdict would be handed down but he was all prepared to call his mother and tell her triumphantly that they would all be going to Fiji for her 300<sup>th</sup> Birthday which, without a doubt in his mind, she would be alive to celebrate.

He was about to dial the number when a familiar figure made eye-contact from a distance and started walking in his direction. All of a sudden, his excitement was tempered. What if it hadn't gone as well as he had expected? What if those looks of "awe" had really been stares of absurdity and ridicule? What if his overconfidence had irked the judges? What if...?!!

Emmet tried to read Jim's face as he came closer, but his nerves were now on fire and could not process any sort of rational analysis. What would Jim say? Would it be good news? What? What? WHAT?!!!!

"Loved that part about life actuaries finding a new niche," said Jim. "Looks like I've found mine. My patented model has already run trillions of simulation results based on all the variables of the hearing and I am confident that the results are statistically significant at the .00001% level." Jim paused for a smile. "Emmet it looks like you really wowed them. My model says there's a 99.999932% chance that you are taking that Fiji vacation for your mom's birthday."

Emmet was at once excited, relieved and overjoyed. He once again began to dial his mother and was on the last digit when Jim interrupted his train of thought.

"Of course," Jim continued. "I am legally required to point out that there is still a .00006% chance that the justices will uphold TEHL."

For a brief moment Emmet was shaken, but within a matter of seconds his excitement was back. The odds were astronomically in his favor and even if he wouldn't know with 100% certainty for weeks, he could still....

"WAIT A SECOND!" Emmet shouted. "Something is wrong! Now I'm no actuary but the last time I checked, 99.999932 and .00006 only added up to 99.999992. Your model must be faulty because there's .000008% missing!"

Jim's smile now grew even larger. "No," he said, "it's not missing. You see Emmet, as you alluded to in the courtroom anything is possible. There's a .000008% chance that

your father WILL come back to life before your mother hits 300. In that case, I thought you all might blow off Fiji and choose Copenhagen instead.”

THE END

## How the Battle Began By Nathan Worrell

And then it exploded.

As a result, Chris spent the past 3 hours trying to remove the blue flakes of plastic that now speckled him. He felt as if he just rolled down a sand dune in the Sahara after taking a not so refreshing dip in a pool of maple syrup. And because he really had no desire to continue through life with artificially induced cobalt freckles, he sighed and resumed the arduous task of despeckling.

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At the same time as the Chris's fiasco, on the other side of town, a crisp stream of carbonation with hints of chocolate and honey trickled down Ted's throat. The autumn stout was a perfect endnote to the work week. It was another quarter-end, and the busiest thus far.

It was the inaugural year of On-Demand Actuarial Consultants. Ted had founded his firm with the idea that actuarial services should always be just a button away. If you could push a button in your vehicle to get road information, why shouldn't you be able to do the same at the office? With the help of groundbreaking hologram technology he set up interactive virtual offices all around the globe for free. He coordinated experts for all sorts of actuarial services, from valuation to hedging. Then he advertised a menu of services and their hourly fees. It worked wonderfully. He was receiving requests from Hong-Kong, Beijing, Sydney, Montreal, Madrid, and New York. He had devoted himself to this project for 7 years, and this was the first time he could truly relax and reflect on his accomplishment. He took another sip of the sweet lager, and reflected how the individual elements of flavor combined for a harmonious effect.

The slightly stale and burnt popcorn did not quite have the same ethereal essence. So because Ted had pointed this out, a waiter went to make a fresh batch. Unknowingly, he concocted a Molotov cocktail of vegetable oil and artificial cheese that reacted with 5 year old fermented butter sludge.

And then it exploded.

A lethal golden rain of caloric napalm and popcorn kernel shrapnel came hurtling towards Ted, who happened to be the only patron at the bar. Just before the point of impact, Ted had the comforting thought that at least he did not have to suffer through crappy popcorn anymore.

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And then it exploded. Well, at first it just fizzled and vibrated. Then, after a moment of calm it moved on to rattling and mutating. After which, it started furiously spinning and started wailing. Finally it turned inside-out, ricocheted against the walls, suspended in mid-air and then it exploded.

Elliot couldn't be happier. He had finally perfected his replica of quantum mechanics. It was wonderfully unpredictable, completely befuddling and beautifully confusing. Much to his delight another globule randomly appeared out of thin air and started its own unique spastic ballet.

In his state of bliss and euphoria, Elliot almost didn't hear the phone ring. The moment of triumph and glory quickly faded. He ended the call, dialed Chris's number and then left for the hospital.

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*"But software light through yonder Windows breaks-  
It is the least and JULIET is the sum..."*

The TV droned on in a replay of Actuarial Theater, the story of Rho-mu and JULIET. This classic tells the tale of two software giants, the Martingale and Caplets companies, who compete in a hostile market with their proprietary key actuarial software programs. However, through an accidental double installation, an actuarial student discovers the two programs work in perfect harmony. Instead of recognizing this star-crossed compatibility of products, the companies build up their walls and further intensify their rivalry. The actuarial student then installs a virus in the programs that makes them self destruct. Unfortunately, the student forgets to uncomment the final line of code that would have made the rho-mu program wait a few hours for the JULIET code to recompile. So the rho-mu program tragically ended up completely erasing its memory. As the JULIET code resumed functionality and there was no more rho-mu program, there was a fatal error and both programs were forever rendered useless.

The tragedy appropriately fit the ambience in the hospital room. Chris and Elliot looked over their bandaged brother as he slept, recovering from the treatment of the burns that the agent-popcorn had inflicted.

The brothers' vigil lasted through the night. They reflected on their childhood. No one knew who their parents were, but there was someone they called father. They were orphan triplets and had been left at the doorstep of a blind mechanic named Cy. He had not known how he would raise the boys. However, he also couldn't see the cars he worked on. So he raised them in the same manner as he worked on cars, trusting his reason, instincts and senses to guide him.

He taught them how to be self-reliant, and how to overcome adversity. He taught them how to solve problems- to get behind the symptoms to go past what could be seen. Cy showed them how to go beyond where most people stop. Most people only fix the symptom, not the problem, and almost always forget about the cause of the problem. Cy instilled an invaluable analytical capacity in the boys. Always asking series of questions: what caused the problem, what else could happen as a result, what were the ramifications of their solutions, how could this be avoided, and best of all how could this be improved? Most importantly he taught them that a problem is only a matter of perspective. It is only a problem if you make it one. Cy had an infectious and resounding laugh, and as he worked with his boys in the shops the clinks and clanks were accompanied by an always present chuckle. He ignited their imaginations, always prodding them to unleash the creative potential of their minds.

They acquired an insatiable thirst for math and invention. Their first favorite toy as toddlers was a talking calculator. By elementary school, they had modified that same calculator to analyze patterns in the music of Johan Sebastian Bach. Childhood chores took on a life of their own. Their house eventually became a conglomeration of Rube Goldberg machines. Lighting a candle would initiate a chain of events and then the dishes would be washed. The years flew by, flickering through their minds like an old cinema reel.

They recalled their decision to become actuaries. The interconnection of finance, economics, hints of physics, computers, and most wonderfully of all, probability, was too much of a temptation to refuse.

Chris and Elliot looked at Ted asleep on the hospital bed. The only thing stronger than their passion for knowledge was their bond to each other. It had its roots in their blood, the kindred bond that creates a hidden link. It was strengthened in the laughter they shared as they succeeded and failed at numerous experiments and endeavors. It was forged in the furnaces of fate, when Cy was diagnosed with cancer. The brothers exasperated themselves, tirelessly looking for ways to defeat the force of destruction that had consumed their mentor. Cy called the boys to his room one winter evening.

“You boys have given me more joy than I had ever expected. I am just a simple mechanic. Yet I have lived with riches any billionaire would envy. I’m headed for the scrap yard soon. Don’t be sad. What is it that makes a car run? An engine is worthless without fuel, fuel is stagnant without a spark, and a spark my boys, must come from a driver. I’ve been driving this vehicle for a long time. I’m ready for an upgrade. It’s going to be magnificent, beyond comprehension. If there is one thing that I have taught you, it’s *carpe diem*. Seize the day boys. Everything is temporary, and if you waste your time holding on to something, you will miss the next opportunity that will take you to a place you haven’t even conceived of yet. Remember, it’s only a problem if you make it one. I never expected to have infants on my doorstep, and I didn’t expect this either. You hoodlums have been one hell of an adventure; I can’t wait to see what this one will bring.”

They stood together with Cy. In their eyes were the reflections of the flames in the fireplace, and the falling snow outside the window. The image transcended to their hearts as the man who raised them took his last remaining breaths. He chuckled and said,

*Ted, Ted- popcorn in his head and mankind is too  
Stuck like glue, Chris gets blue when he has to  
Elliot sees, holds the keys, knows the score. What for?*

Then Cy left this world, with a grin on his face. The boys dismissed his limerick as a last amusing dream. That was ten years ago.

At long last their brother stirred.

Jubilantly, Chris and Elliot rushed to Ted’s side. After sharing tears and smiles, the brothers sat in collective gratitude, appreciative that they still had each other.

After a while, Ted said, “I may have been blasted by the bar snack from hell, but there’s something I’ve been more disturbed by this past hour.” Chris and Elliot looked at him with eyebrows raised. “What is in Chris’s teeth?”

Chris promptly pulled an azure fleck off his lower incisor. Then, judging by the quizzical looks presented by his brothers, he proceeded to recount his earlier mishap. He told of how he had been designing some super computers. It was a project to develop a data system that was able to stochastically model data from multiple sources with unprecedented speed and reliability. The *crème de la crème* of the Multi-Source and Multi-use Analyzer (a.k.a. Mama) was to be its correlation capabilities. Chris had just finished coating his panel of semi-conductors with a blue protective layering. While he waited for the layer to harden, he began testing Mama. The first test was of a theoretical company that had a life insurance and an annuity product. It completed in 2 seconds. Unable to contain his excitement he loaded in the data for LifeCo from his actuarial examination case study. Tragically, he prematurely powered the machine, only to cause a spark to jump a transistor and the entire aqua casing blasted into a plastic blizzard. Also because the glue had not fully dried, the combustion created an adhesive mist that made any thing that touched Chris instantaneously bond to his skin. Chris ended his story, and pulled another blue flake from his hair.

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Troll had always been an outlier. He got the moniker after he decided as boy that beds and houses were too comfortable. Instead he preferred the lavishness of concrete, and began sleeping under the freeway bridge near his home. His parents originally fought it, but eventually they caved in and when he came back one morning his mother affectionately asked, "How did you sleep little troll?" The name stuck.

His youth wasn't necessarily evil; it was more erratic and troublesome. He was a lad of extraordinary ability. In school, he could finish his tests flawlessly, and in fractions of the time it took his peers. Yet his attendance was notoriously poor. He didn't get along well with his classmates. At recess he could always be found on the outermost edges of the playground, as far away as possible from the main distribution of children.

When not at school, he would occasionally take pleasure in surprising his parents in odd ways. One day he ate every morsel of food in the house. His father came home to find him passed out after his gluttonous endeavor. As Troll regained consciousness his father was arguing with his mother. "I just never know what to expect with him. He is draining me of my resources!"

"I know he is difficult dear. Let me talk with him, go and work in the garden. It will relax you." As she reassured her husband, Troll's mother knew her husband was speaking the truth. Ever since he was born, they consistently had their expectations shattered. In fact, Troll's parents were of Greek decent, darker featured, olive skinned and with black curly hair. They were completely amazed when their son came into the world pale and with red hair. They did some research and both of Troll's parents ended up finding ancestors in their gene pool with the dormant recessive traits.

Troll's father was a gardener, with a specialty in shrubs and hedges. He was well known in the town for designing hedges to protect houses from particularly harmful storms. Troll constantly tested his father's designs. There was an addictive thrill that he thirsted on in trying to figure out where the weaknesses were. The passion superseded any feeling of remorse when the strain he caused on his father only made the hedges more costly for everyone to buy.

Eventually Troll tired of school and destructive horticulture. In his familiar, yet unpredictable fashion, he engraved a farewell note on the garage of his parent's house.

Troll went and explored the breadth and the depth of the earth. He went deeper, higher, and further than any explorer had ever gone. He did it alone. Always he pushed himself. He stayed awake for weeks, could hold his breath close to an hour and could contort his body like it was origami. And when he was absolutely physically exhausted, he stretched his mind. He learned several languages, of which many were archaic, obtuse or not even written down. He devoured math and science and philosophy. He was compelled, always, to search for the edge, and when he would find it, to go beyond.

It was his third day in the middle of an Antarctic blizzard, and he was trekking to the South Pole, wearing nothing but a tunic. Miraculously he willed his body against hypothermia and frostbite. Suddenly the storm halted, he looked up and saw the *Aurora Australis* silently slither between the stars, and he shivered. It wasn't because he was cold. Rather it was a convulsion inspired by sheer giddiness as he realized a new destiny. The stars that shone like sequins on a black nightgown reminded him of a realm of limits he could push. It wasn't the outer reaches of the universe that he found inspiring, but the multitude he saw in the sky reminded him of his fellow humans he felt just as far from.

He started running, he would test the edge of humanity, push it to the extreme. The concept resonated through his body and he couldn't contain it. Alone, on a sheet of ice in the Antarctic night he erupted in laughter. This would be fun.

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A flickering red patch of light spontaneously appeared and gyrated with the fury of a frightened chipmunk for a few instants, then promptly ceased to exist.

"Ooooooh"

Then a pickle with wings simultaneously buzzed Chris and Ted who were on opposite corners of the room.

"Aaaaaah"

"You guys realize that was the exact same thing in two different places at the same time right?" Queried Elliot. His brothers just watched, hypnotized by the bizarre spectacle in front of them. This was Elliot's labor of love; it took up his whole basement. He was completely enthralled by the ideas behind quantum mechanics- that one can only assign a probability cloud to where a certain electron may be at any given time. Behavior is only understandable when observed and measured, but always unknown at any instant. He relished in the counter-intuitive precepts of things appearing out of nothing, and simultaneous appearance. By creating this large scale replicator, he hoped to see if there was some way that the ideas of tracking movement of particles in quantum science could be applied to actuarial applications. He was drafting ideas around the movements of equity markets and their anomalies.

The brothers drifted together and Elliot placed a hand on each of his brothers shoulders as the watched the enigmatic confetti. As he did so he felt a rush of energy, as if he just smacked his funny bone, except instead of his elbow tingling, it was his whole body. Then he noticed that Chris was starting to glow, a light blue aura shining around him. And there

was a strange smell of popcorn, cigars and ale. Frightened by the strange happenings, Elliot removed his hands, and the phenomena stopped.

What had just happened? The brothers didn't need to speak. They looked at each other and understood that they had all felt the odd sensation. It was both frightening and exhilarating. Together they sat on a charcoal corduroy sofa and tried to reason out what had just happened.

Ted spoke first. "Remember the crash of 2008? It was like people were drunk, and money and credit were the happy hour specials. Stay with the metaphor boys. It started off great, a simple social event. People had a few drinks and were enjoying themselves. However, soon there was a little too much alcohol being consumed, and people couldn't handle it. They started getting paranoid or acting irrationally. They looked around, hoping that someone had been responsible and not over indulged in the consumption. However since everyone expected someone else to be responsible, there was no designated driver to be found and the thing crashed. And it was up to those who stayed away from the bar, or left early, to clean up the mess that the drunkards made as they wreaked havoc on the town."

"Bars are amazing capsules of humanity. Alcohol disables the frontal lobe, which gives us reason. So a bar is a world where reason ceases to play a prominent role. The bar I was at when I had my accident has been around since Sam Adams dumped tea in the harbor. Over the years the culture and thoughts of humanity have entered into the walls. The bar has been a silent observer over the centuries of our behavior. In these pieces of matter are the echoes of human laughter and tears, of hopes and dreams. Most importantly, if something happens that doesn't make sense, I feel like I can explain its existence because my exposure to this reasonless world."

"When we were down in the basement, I felt the knowledge of the years was in me. Somehow, I have absorbed that wisdom. I can't tap into it now, but I'm sure if we did that again and you gave me any situation, I could tell you the realm of possible human reactions to it, whether rational or irrational. It's like behavioral finance intensified."

Chris and Elliot soaked in their brothers' proclamation. Then Chris spoke up.

"I've got some weird Kool-aid going on in my brain too. I think microscopic pieces of my computer penetrated my skin. They must have synthesized with my nerve cells. I had built my computer to replicate the human nervous system, since it operates so efficiently. I think that made it possible for this reaction to occur. But when we were down there, and I was watching your quantum machine produce shapes, I could see their probability distributions in my mind. Not only that, I could pick up on what Ted was thinking, and I think I could get correlations between a human action and some other event. It happened real fast, and I couldn't figure out what it all meant. But they were there."

Elliot whistled. "Piranhas and pit bulls boys! We may have just become superheroes. Remember what Cy said when he was on his way out?"

*Ted, Ted- popcorn in his head and mankind is too  
Stuck like glue, Chris gets blue when he has to  
Elliot sees, holds the keys, knows the score. What for?*



It's a math equation fellas: What for? How about the number four? Mankind is 2, Chris has 2. Apparently I hold the keys, probably my computer keyboard. If we can perfect this, we could really be of use to the world. I can rig my machine to generate fields of uncertainty that would be interpreted by Chris to formulate distributions. Mix in the human element that often puts mathematical models off track, but have Ted decipher it and we may have quite a thing here. This is a fusion of technology and human ability that could never have been engineered. Now it is our responsibility to use these gifts."

The brothers gathered themselves and ventured back into the cellar like monks engaged in transcriptions. For hours they pushed themselves, and perfected their abilities. They tested themselves with a multitude of situations and circumstances. Chris glowed like an indigo watch. Ted meditated on bar fights and romances to extrapolate the course of human action and behavior. Elliot generated the fuel for which his brothers could manifest their powers.

They took a video recording of their new abilities and sent it to the American Academy of Actuaries, the Casualty Actuarial Society and The Society of Actuaries. Soon through Ted's On-Demand Actuarial Consulting service, they were helping companies across the globe create innovative solutions to their problems.

One day, there was a knock on their door. The Fed Ex guy/ special agent didn't take long for the agent to convince the brothers to take a ride a la faux delivery vehicle to Washington.

Upon arrival, they were greeted by General Nikita Markov. She had served for years as an intelligence officer, and had resigned about 5 years ago. She was well respected in many disciplines. She took them to a top secret facility deep underground. The facility was filled with people working diligently behind computers. It was a city of monitors and hard drives. In single file they followed General Markov to her office.

"Gentlemen. We received word of your exceptional talents and have desperate need for your services. I apologize for the lack of formalities, but truly there is no time to waste. Let me present to you Theo Vega, aka Troll. "

A grainy image of a man appeared on the screen behind the general's desk. Ted thought that was an odd familiarity behind the face that he just couldn't place.

"I am sure you remember the great St. Louis earthquake in 2012, the loss of Florida in 2014, and the influenza pandemic of 2018. Well, the man you see here is responsible for all of these disasters. As you know it has been 5 full years since the last major disaster."

"Troll doesn't act alone. He used to, but now he has a ruthless team that works for him, although they aren't aware of it. He uses a complicated spider web of communication. All of his minions just know that they are compensated very well. Troll refers to them as his Terrifying Although Ignorant League, TAIL for short. We believe he has been invisible in the last few years because he is planning on disrupting the financial markets and his goal is a complete global collapse. Now unlike terrorists, Troll's only motive is his own curiosity. He is a self-proclaimed disruption junkie. He has extraordinary abilities, and is quite impressive. We have only acquired this one photo, and a farewell note that he etched in his parent's garage. We mostly track him by the impressions he leaves behind. He is quite elusive."

This last statement was a distant echo as Ted suddenly recalled where he had seen that face. It was the waiter at the bar who exploded the popcorn machine.

“We have no clue what he wants to plan. We only know is that his signature is events that exist beyond six sigmas of any current model. We have assembled 95 of the world’s best actuaries to study these tail events to try to help the world brace for whatever Troll and his TAIL will concoct. And now we have you 3. We hope with your sophisticated and frankly unprecedented forecasting abilities you can help us. Companies are naïve and probably appropriately unconcerned about ‘unlikely’ threats to their business functions. We need to be concerned for them. The stability of the world is in our hands. If the world economy falls apart, the costs will be enormous.”

“From this point forward, Chris, Ted, Elliot, you are second in the Markov process and these actuaries are at your command. Your team will be referred to as C.T.E 95 and it is your mission, should you choose to accept it, is to quantify the TAIL risk.”

And so the battle began. Troll against this actuarial outpost. Everyday men and women never know of the underground struggle. But it rages on. So next time a coin is flipped and it doesn’t land heads or tails, but rather perfectly balanced on its edge, think of the unlikely. Recall the chaotic and appreciate the three heroes dwelling in a world of virtually zero probability.

**Joe A**  
**by Tony Batory**

The year was 9996 and Joe Amialanczyk was forced to retire. He wanted to continue working the beyond the standard retirement age of 27. Joe liked his actuarial project on AI life expectancy and the workweek was cut back to 4 hours so it really wasn't a burden. When he made his request for an extension, his manager first expressed shock which almost seemed contradictory coming from an entity with an Artificial Intelligence. But with the usual instantaneous efficiency, the AI researched, processed, documented and deployed the solution. The request was tersely rejected. Joe had to retire. He never got a clear explanation as to why. Sure, the technological advances of the past eighty centuries had made 'work' unnecessary. It was only a cliched link to the past, some sort of historical remnant to remind everyone just how far humanity had really advanced. Leisure activities were at the forefront of that advancement and the exploration and exploitation of millions of worlds had provided the fuel for centuries of conspicuous leisure consumption.

Joe felt it was all wrong at a very intuitive level. He did know that his work routine would let him turn those feelings into facts, and create demonstrations from his vague impressions. He also needed his brother Steve's help, not only because of Steve's security access but also for his brotherly emotional support. Joe knew that making Steve understand was not going to be easy.

When Joe returned home, Steve was furiously tapping the keypad on his Zbox 9996.

'What are you doing?' asked Joe.

'Joe-aaaaaa. I'm playing Frock Star Hero against two billion opponents,' replied Steve.

'I thought that every song combination was used up years ago.'

'They've added 64 new instruments, yutk', replied Steve somewhat annoyed.

Joe shook his head. 64 instruments and 2 billion opponents would give him a headache. He grabbed the Zbox unit, pulled it from Steve's palm interface and threw it against a wall. Steve was aghast. He hadn't seen anger in years. Both men almost expected the unit to break but quickly remembered that versions as old as a Ybox 9600 were designed to be virtually unbreakable.

'Joe-aaaaa, what's the matter?' asked Steve.

'Please, stop calling me that.' Joe sighed. 'I'm tired of all these meaningless diversions. When is someone going to stand up and do something worthwhile?'

'What about your date last night? She looked pretty worthwhile,' chided Steve.

‘Exactly my point she wasn’t real.’

‘Huh?’ Steve looked confused.

‘She told me that she was 126 years old and had 27 children. Well, I tapped Intellinet before they kicked me out of work and she’s really 143 years old and has 37 children. She wasn’t lying, she just lost track, yutk. Yea she was beautiful but she just wasn’t real.’

Steve smirked, ‘you and your actuarial life expectancy junk. Gimme a break. If you touch her she’s soft, if you squeeze her, she giggles, if you pinch her she yelps. What could be more real? And with that level of experience she must have been pretty good, right?’

‘But every date is like that. There’s minimum specifications like it was some kind of computer program. It’s the exceptions that are special. If there aren’t any exceptions then nothing is special.’

Now Steve was really confused. ‘Wait a minute. Do you just say they kicked you out of work?’

Suddenly there was a loud explosion outside. It took a full minute before the echoing rumbles subsided. ‘What the yutk was that?’ screamed Joe. They looked outside but everything looked normal except for dark cloud that appeared to be in the upper atmosphere.

Joe raised his hands tap IntelliNet. But all his inquiries just kept getting referred back to the main menu. “Yutk, see, this is exactly what I’m talking about. Games, dates, vacations, parties but nothing meaningful like ‘what was that explosion?’” He pulled his fingers away from the wall monitor in frustration.

‘I don’t think I ever tapped Intellinet a non gaming question from home,’ replied Steve. ‘Here, let me enter my security clearance to get into the main database’. Joe knew that Steve’s security job was going to come in handy. ‘The cloud looks like its in orbit somewhere, the timing would be about right for the regular commercial flight from Gamma Luna. I was working on security for some engineers who were dealing with re-entry problems with the commercial starliners. They were trying to counter relativistic effects when a ship goes between supra-light speed and sub-light. Even a nanosecond at relativistic speed, can cause time dilations. Today was supposed to be the first production flight’.

Joe began lecturing. ‘Right, the last thing I was working on was the psychosocial impact of a pilot returning to a world that’s years older when he’s only aged a few days. That’s why centuries ago it was mandated that all pilots have to be AI’s, the impact is too much for a real person. Which time period counts towards life expectancy is a function of...’

Steve knew he had to cut him off before Joe kicked into a lecturing high gear. 'I thought it was because the AI's are better pilots,' he joked.

'Will you be serious, suppose someone sabotaged your test flight?'

'Don't be paranoid' replied Steve. 'I used one of the ten thousand Mario security overlays. It would take 4 years for someone to get through that maze. And why would anyone want to? Yutk, more likely that one of your AI's went bananas.'

Joe thought for a second. His studies had begun to show an inverse correlation between AI's advancing intelligence and life expectancy. If one could even call it life. Joe had theorized that psychological imbalances particularly in relativistic dilations, were the root cause. The possibilities were frightening and Joe tried to ignore them. 'Now you're being ridiculous, you know that the basic laws of robotics would preclude any possibility, yutk.'

'You sound like you're trying to convince yourself. Here it is;'

'FLIGHT 546475 GAMMA LUNA/THRAE HAS BEEN TERMINATED', appeared on the wall monitor.

'What does that mean? Ask for more info.'

'Yutk, I can't get through to any real people, there's only AI's on duty. My entire security section went to Super Bowl MMMMMMMMXXIV.'

'But that's not for another 2 yutk months!' wailed Joe.

'Pre-game parties and tailgates start earlier every year. What did you mean when said you were kicked out of work?'

'Mandatory retirement. But my AI psyche profiling project wasn't complete. I asked for an extension but they cut me off'. Joe felt a swelling sense of uneasiness in his gut.'

'Geez, you speak with such pride about your actuarial projects and being an actuary. Why does bother you when I call you Joe-aaaaa or Joe the actuary?'

'I'm not an actuary any more. I've been terminated,' exclaimed Joe.

'Terminated?' Steve frowned. 'Let me tap something else. Audio monitors, record conversation during the past 15 minutes. System correlate with main security database. Answer the following question. "What's going on?"' Steve saw Joe's bewildered expression. 'I've had a lot of success with these types of general inquiries in gaming situations. The system will respond with some definitions of the most common words in our conversation and then offer possible solutions.'

‘You’re NOT supposed to use the security database for gaming.’

‘I know, I know. But what would the AIs do if they caught me, fire me? Besides, I can really gain an advantage with the inside info...’ Almost on cue, definitions began to appear on the wall monitor.

YUTK – EXPRESION OF DISGUST, FRUSTURATION OR PARANOIA. ROOTED IN COMBINATION OF YUK – EXPRESSION OF DISGUST AND Y2K – ABBREVIATION FOR THE YEAR 2000 COMPUTER PROCESSING ERROR.

‘Intellinet Hold!’ interrupted Joe. ‘I’ve heard of Y2K. There was widespread fear that computer systems were going to fail because of date errors when moving to a new millennium. But nothing happened, there were no outages, no problems. The whole thing was paranoiac farce.’

‘Well’ re-interrupted Steve, ‘that fits with how yutk describes overzealous fools. Wait a minute, that’s it!! The flight engineers were going to counter relativistic dilation using wormholes and gravitation to slow time.’ Now Steve began lecturing. ‘My Mario security protocols can provide the appearance of advancing time. That’s what makes it so effective, it looks like its taking 4 years to get through the maze. If the relativistic counter effect disabled the internal clocks, and Mario advanced local time past the decinnium, the on board Intell could then fail.’

Joe and Steve fell into stunned silence. It was a weird moment given their fondness for lecturing and interrupting each other. Steve could only think of how his security protocols were going to need massive restructuring. He whistled softly thinking of their widespread use. But Joe the actuary saw a much larger, much more ominous picture. The quadrillions of humans scattered throughout the galaxies were overly dependent on technology. Basics needs, like food and healthcare, communications, transportation, everything, even the leisure activity. With humans so focused on their diversions, AIs had all the support roles. Their artificial psyches were subject to a different set of technological problems, a fact that Joe’s incomplete studies had just begun to document. A moment of sudden clarity hit him and he realized the awful truth. In a short 4 years, humanity would be facing a cataclysmic disaster, Y10K.

# Math Does It Again

By Bradley Kamps

Atop the Empire State Building, looking out over the city with a watchful eye is a man few have seen, fewer have talked to, but everyone owes their life to. This man possesses a few very spectacular powers and has used them for the good of many over the course of the years. He waits now for the next disaster he will help avert, for he is Actuary Man.

Suddenly there is a beeping. Actuary Man's heart beat quickens. Is there a bomb nearby? Oh, wait, that is just his Blackberry and an incoming message. He wipes the bead of sweat off his forehead, trying to calm his heart and checks the message. A tornado is tearing through the Midwest and they need his help.

Some may wonder how a man on top of the Empire State building will be able to help people in the Midwest but it is really simple. It was a fluke accident during the examination process that turned Actuary Man from just an ordinary student into a superhero. Since that day, Actuary Man has been working for the good of the people using his mathematical skills and his slightly modified TI-35X. It is this calculator that he pulls from his shirt pocket where it was resting, always near his heart.

His fingers fly across the numbers entering his current location, the location of the tornado, and a correction for the slightly warmer day than normal. He gets the number he needed, enters it into his calculator and hits enter. His homemade calculator shoots a laser at a nearby wall, a wormhole opens up and Actuary Man steps into the wormhole. Although it feels like his insides are being all mixed up, this is becoming a more normal type feeling and soon his feet touch ground again as the wormhole spits him up in a wheat field in Kansas.

Off in the distance he can see the tornado. It is a big one and debris is getting torn up. A town is not too far ahead and directly in the path. Actuary Man must act quickly. Mathematical formulas fly around inside his head. The air speed of the tornado, the direction, the intensity, and the amount of debris are all taken into account. Again his trusty calculator flies into his hand and numbers fly from his mind through his fingers. The result pops up. Is it right? He has to be sure. He is only going to get one chance at this.

He double checks his formulas, and makes sure everything was entered right. Finally he is satisfied. He picks up a pebble at his feet, weighs it in his hand to make sure it meets to required specifications, and then tosses it as hard as he can at the tornado. The angle and direction were just perfect as the pebble zooms toward the tornado, exactly in the opposite direction of the rotation. The wind seems to have no affect other than to keep the pebble rotating around the tornado exactly opposite of the way it is supposed to. Faster and faster the pebble goes until it reaches the very center of the rotation and the forces are too much for the tornado to stay together. With a boom, the tornado blows apart. Debris falls all around Actuary Man, including a cow that looks like it has been spinning for a very long time but is otherwise unhurt. Our superhero remains unharmed because debris fallout was also in his calculation and he knew where he needed to stand.

Once again, mathematics conquers all. He stands there overlooking the now clearing skies and the town that has been spared like he was king of all this land. He is startled, though, by the voice of a young boy behind him saying "That was amazing". He almost drops his calculator as he trips over a mound of dirt and falls flat on his face. Mathematics has always been his friend and interacting with humans has always suffered

because of it. Standing up and trying to remove some of the mud from his clothing, Actuary Man sizes up the small boy behind him. The boy looks in wonder at the mud covered man before him.

If there were walls to bounce off, the little boy would be bouncing off them. He says “My parents and I were hiding in that ditch. We saw it all. That was AWESOME!!!! How did you do that?” Actuary Man is a little dismayed at the rapid barrage of words but he gathers his wits and replies “It was really simple actually. If you take the Enhanced Fujita scale, multiply that by the height of the funnel cloud, raise that amount to the ...” Actuary Man stops when he realizes the kids face has gone completely blank and that he was lost within the first couple words. His fingers twitch on his calculator. Perhaps a quick escape is in order.

Quickly thinking, an epiphany hits. Our superhero starts explaining “It is all mathematics. With math, you can solve many problems in the world. Study real hard in school and you can one day be like me.” Actuary Man knows he succeeded as he sees the boy’s eyes light up and he knows he has touched one more life. He sees the parents of the boy standing on the road observing. With a nod to them and a pat on the head of the boy, he enters his destination into his calculator, opens a wormhole and goes to his next adventure knowing not only is his role to save the world but also to help spread knowledge.



# No Country For Young Men

Chris Fievoli, BMath, FSA, FCIA

The alarm in Dorian West's hotel room went off, as usual, half an hour before he planned to get out of bed. He needed the extra time, as his arms and legs had once again stiffened up overnight. Even when he did manage to raise himself to a sitting position, they still felt like steel pipes. He had spoken to his doctor about it, but there was little he, or anyone, could do at this point. He was told that's just what happens once you reach the age of one hundred and fifteen.

Slowly and methodically, he shuffled over to the bathroom, where he would spend another half hour preparing himself for the day. His appointment at the Magnolia Life Assurance Company was at ten o'clock, which meant he had just over ninety minutes to walk the four blocks to their head office. It would be close, but he figured he could make it in time.

By the time he reached the sidewalk outside the hotel, he was already exhausted. Stopping to catch his breath, he took a moment to observe the activity on the street, or more accurately, the lack of it. The sidewalks were virtually empty, except for the odd wizened individual ambling along to whatever endeavour occupied their day. A public transit bus zipped silently past him, remotely-controlled from some unknown location, stopping every few blocks to pick up and drop off its slow-moving cargo of passengers. There were no cars on the street, as virtually nobody felt comfortable driving anymore. The pavement itself was in sorry shape, full of potholes, massive cracks, and barely legible painted markings. There simply weren't enough people young enough and fit enough to do the labour required to repair them. Like the crumbling buildings that filled the city, they were simply left in a permanent state of neglect.

As Dorian began his journey, he felt the familiar buzz of his Blackberry in his coat pocket. He pulled it out to see a message from his old colleague Kent Melville, inquiring where and when they would be getting together. He had known Kent for decades now, and always made a point of catching up when he was in town. He sent a quick message back suggesting they meet in the bar at the hotel at six o'clock, which would spare Dorian the inconvenience of trying to navigate his way around the city at night.

He paused for a moment to stare at the device in the palm of his hand, noting how the basic design hadn't changed in the last eighty or so years. They had always said that innovation in technology was the province of the young. Examples such as this made that old maxim even more apparent.

Dorian remembered being young. It was a time of great promise, when all the dreams and expectations of scientific research seemingly were on the verge of being realized. Just as he was qualifying as an actuary, the first reliable cures for cancer were being widely developed. Within a couple of years, effective treatments for heart disease followed. By the end of the decade, the illnesses which had plagued countless generations beforehand seemed to finally be on the verge of eradication. It was an exciting time, as the quality of life for everyone was expected to vastly improve.

The actuaries, it seemed, were the first ones to see the potential downside to these great advances. As life expectancy increased, pension plans and companies that issued life annuities were the first ones to feel the pinch. Expected payouts began to run substantially longer than anyone had imagined, and the losses began to mount. There was an offsetting

benefit on the life insurance side, but the mortality risk had been reinsured and retroceded so many times over the years that there was no benefit left to be had. A handful of reinsurance companies nestled somewhere in the Austrian Alps became extraordinarily wealthy as a result. Eventually, the life insurance market dried up altogether. With the possibility of dying becoming more and more remote, no one bothered to buy coverage any more.

The pensions industry eventually disappeared as well. No one could afford to pay incomes for another seventy years after workers retired. Companies began cutting back their benefits, and ultimately eliminated pension plans altogether. Given that individuals found it impossible to save enough to support themselves for an increasingly longer period, the concept of retirement evaporated. Besides, the labour was needed, due to another demographic calamity that no one had anticipated.

As advances in medical science reached across the globe, former third world countries were able to finally climb out of the poverty that had plagued them for centuries. At the same time, though, birth rates declined precipitously worldwide. Europe, which had long ago dropped below one child per couple, was emptying at an alarming rate, and the immigrant population simply didn't exist to make up the difference. Even the United States, which had resisted the trend for as long as it could, soon found itself with plummeting birth rates as well, until it reached the point they were at today. Zero population growth, but not for the reasons anyone imagined. There was virtually no one dying, and no one being born. You simply had a world where everyone was getting older year by year.

These were strange days to be alive.

These thoughts swirled through Dorian's head as he made his way to Magnolia's offices. He had expected to be retired – and deceased – long before this. Instead, he was still making a living, consulting with the handful of insurance companies that still existed. Magnolia was one of the survivors, having accumulated huge blocks of business at discount prices from other companies that either went insolvent, or just didn't want to bother any more. By now, they were just in the process of letting their policies run off, trying desperately to find a way to make money off a block of annuities that refused to go away. That was to be the topic of this morning's meeting. Dorian had completed the valuation of their annuity business, and he knew he was going to be disputed.

They were to meet in the conference room on the third floor. Dorian made it on time, but the CEO and CFO were late, as usual. He wasn't surprised. They were both fifteen to twenty years older than him, and had difficulty getting around these days. Dorian sat patiently and looked at his surroundings. The walls were dingy and in need of a good cleaning; the carpets stained and cluttered, with bits of paper and debris piled up in the corners. Even the ceiling lights were dim and in need of replacement. He looked up to see a huge brown stain that covered over half of the plastered surface; it wasn't there the last time he was here. If they could find someone to make the necessary repairs, it would look much more presentable, but that was a young man's job, and thus not likely to be completed.

Ivan Chesters, the CEO, was the first to arrive, rolling himself into the conference room in his shop-worn wheelchair. Adam Payne, CFO, followed a few minutes later, hobbling in clumsily with the aid of a walker. They exchanged pleasantries before getting down to business.

"How was the trip?" Ivan inquired.

"Tiring," replied Dorian. It used to be a two-hour flight to get there, but no one felt comfortable piloting planes any more. Now, it was an uncomfortable seven-hour train ride.

Adam cleared his throat loudly, and gripped a copy of Dorian's report with his gnarled hands. It was printed in forty-point font, making it much thicker than it needed to be. "There are a few items we would like to discuss with you," he intoned. Small talk was not his preferred way of conducting business. "Specifically, the assumptions that were used to value this block of annuity business."

Dorian knew they would key in on this. He had his answers rehearsed and ready in his mind.

"If I read this correctly," Adam continued, squinting at the report through a pair of eyeglasses that covered half his face, "you have completely eliminated any mortality assumption from your valuation."

"Effectively, yes," Dorian replied. "There is a base mortality assumption, but it is so small, that any meaningful margin reduces it zero. So you are correct in that the reserves presented in that report use no mortality."

Ivan wrinkled his brow, such that it matched the rest of his face. "So, effectively, you're saying no one will die? Seems a bit extreme to me."

Dorian knew they would jump to that conclusion. "No, not exactly. It's just that the probability of dying has gotten so low, that adding any margin for uncertainty effectively eliminates the assumption altogether. Actuarial practice has been moving in that direction as of late." He knew this last statement would hold no significance for them, but he decided to add it anyway.

Adam shook his head in disbelief. "That may be fine for other companies, but I question whether it's appropriate for our business." He paused to swallow a handful of coloured pills that he kept in a black zippered bag.

Dorian knew this argument would be raised as well, and he was prepared to address it. The notion that, somehow, this company had the foresight decades ago to sell these products to individuals with higher than normal mortality was absurd. Especially if the policies were sold by other companies altogether, as was the case here. It was fallacious to think their experience would be different from anyone else's. "There is nothing to suggest, in any studies, that one company has a particular advantage over another in terms of annuitant mortality. This has been researched fairly thoroughly, and the profession is in agreement on that point."

Adam continued to scowl at him from across the table. "But did you study the experience on our block?"

"No, there was really no point. As I said, there is no acceptance of the notion that – "

Ivan cut him off. "I really think that is something that should have been looked at," he said curtly. Adam nodded in agreement; the look in his eyes indicated that he was not going to be convinced otherwise.

Dorian knew when to choose his battles. "What I can do," he said, "is take some time this morning to look at your company experience. But, honestly, I don't think it will show anything different from what I have already told you."

"Let's do that, then," Ivan said. "I think we would all feel better if we knew for sure, instead of surmising." Somehow, Adam had dozed off in the interim. Ivan nudged him awake with a sharp elbow in the ribs.

Dorian didn't mind the extra work. It would mean a few extra billable hours for him, and if it made them happy, it would be a win-win.

One of their younger assistants – she couldn't have been more than eighty – ushered Dorian to a small office in the far corner of the building. A couple of large black wires drooped from the ceiling tiles above, but otherwise, it was a decent enough workspace. The windows afforded an unobstructed view of the city below. Dorian could see the iron frames of several uncompleted building projects; beyond that, he spotted a handful of schools which had clumsily been converted into retirement homes.

Turning to the computer screen in front of him, Dorian set to work. He expected that the task would only take a couple of hours. He already had access to all the policy data, and using one of his pre-programmed experience study programs, he expected to have a quick assessment done by lunchtime. Then, he could demonstrate to Ivan and Adam the folly of their position, and he would be on his way.

When, after about an hour's effort, he was able to get his first mortality ratios, it was apparent that he had made some sort of error. The ratios seemed to be off by a factor of ten or so. Assuming he simply misplaced a decimal, Dorian carefully went through his calculations in search of his mistake. When he failed to find it, a feeling of concern began to come over him. Mortality rates ten, eleven, twelve times expected simply didn't make sense. Did he read the experience data correctly? A check of that appeared to confirm that he did.

Perhaps the data itself was faulty. He got a hold of his contact in the IT area, a nonagenarian by the name of Justin who, despite repeatedly cursing the systems he had to manage, proved to be a reliable resource. Together, they made the requisite checks, and determined no problems from that end either. They even opened a few claims files and verified that the death notices were in fact valid, and duly documented.

Dorian worked straight through lunch, now feeling somewhat panicked at what he saw. The last thing he wanted to do was go crawling back to Ivan and Adam, watching them sneer over him as he shamefully admitted they were right. But they couldn't be right, could they? The answer had to be somewhere.

He began to drill down into the numbers. Perhaps there was a difference by sex; no, the ratios for males and females were both consistently high. He suspected there was a geographical difference; that perhaps some region of the country had been ravaged by some disease, even though he probably would have heard about that already. But, with some minor variances, each region of the country exhibited the same pattern. Annuity amount, year of purchase, indexing provisions – each aspect generated the same unbelievable results. It was maddening.

Dorian needed time to clear his head. He stood up, stretched his arms, and began to slowly wander the halls. None of the office workers seemed to notice him. They all sat hunched over their desks, apparently unable to sit upright. The one thing that struck Dorian was how quiet the atmosphere was. No animated conversation; none of the office chatter that was so commonplace back when he started his career. It seemed like everyone was resigned to the fact that this was their fate; to toil away at jobs they had no business doing at their age. Dorian tried to make eye contact with some of them, trying to elicit a smile, or a friendly nod. He was unsuccessful.

He returned to his desk after about fifteen minutes. The break had done little to inspire him, but at least he had a few ideas about what to look at next. One of them was looking at the results by year of death. It was then that things began to come together.

What he saw was intriguing. As it turned out, the mortality experience was actually close to expected, up until a year and a half ago. Then, for some reason, the rates began to climb, accelerating with each passing month. For the last quarter, they were ridiculously high. But why?

The solution came to him in a flourish. Dorian immediately began to feel nauseous; his temples started to throb as a migraine formed in the front of his head. The problem now was no longer how he would refute Adam and Ivan. It was what action he would have to take himself.

They gathered at half past three in the conference room. Ivan was actually on time; Adam arrived a few minutes later. They took the same seats across the table from each other. Dorian sat silently, knowing he would have to choose his words carefully. After taking a moment to compose himself, he spoke.

“I’m going to have to resign from this case,” he said solemnly.

Adam was clearly perplexed. It didn’t appear that Ivan heard him clearly.

“For whatever reason?” Adam inquired.

Dorian cleared his throat. “It’s become apparent to me that certain actions are taking place which I cannot condone. At the same time, I do not have adequate proof to raise them with the appropriate authorities. So, the only alternative is for me to walk away.”

Adam turned the corners of his mouth down in disdain. “I have no idea what you’re talking about. Will you please explain what’s going on?”

“I think you know exactly what I’m referring to.”

Adam raised his hands upwards. “Enlighten me,” he said, with a shrug of his shoulders.

Dorian swallowed hard, and spoke. “I have reason to believe that you are murdering your customers.”

Adam’s reaction caught him by surprise. Rather than express shock or dismay, he smiled. But it wasn’t a pleasant smile; it was one of vindictiveness. Adam began to laugh. At first, it was a low chuckle, but it soon turned loud and derisive. Ivan joined in, evidently finding humour in it as well.

“That is absolutely preposterous,” Adam declared. Their laughter dissolved into fits of coughing and hacking.

A bead of sweat rolled down Dorian’s temple. “I don’t believe so,” he retorted. “The mortality ratios on your business have shown a definite and steady increase over the last fifteen months. Something happened to cause that. It couldn’t be accidental. And, given that you stand to make money every time one of these contracts terminates, I could come to no other conclusion.”

“And your proof of this is where?” inquired Ivan.

“That is the problem,” Dorian admitted. “Apart from what I see in your experience data, there is no other proof. Which is why I opted to resign from this assignment, rather than pursue it further through official channels.”

“Well, isn’t that handy,” Adam replied indignantly. “Make a ridiculous accusation, and then walk away from it. That’s the problem with you actuaries. You look at a bunch of numbers and think you have all the answers. You make assumptions, and think that gives you the conclusions. But in fact, you have nothing.”

“I will state it for the record,” Ivan added. “We have not murdered any of our customers.”

“You are free to pursue this with the police or whomever you wish,” Adam said. “I strongly suspect that they will think you have lost your mind.”

Dorian sat silently. What was he thinking? The admonishment at the hands of these two old codgers was humiliating. But he realized that he had only himself to blame.

“We agree it’s best that we terminate our relationship,” Ivan said coldly.

Dorian nodded, and lowered his gaze. He started to regret being so forthright in his accusation.

The doctors had told him to avoid alcohol, but Dorian made an exception today. He was finishing his first scotch, trying to get the attention of the waiter to bring him a second. It was relatively quiet in the poorly lit bar of the hotel. A few patrons sat huddled together, engaged in barely audible conversation. Others drank alone.

It was then that Kent Melville made his entrance, moving quickly for someone who required a pair of canes to get around. His face brightened as he saw Dorian, and he took a seat beside him. “How are you, old man?” he declared, as he signalled to the waiter to bring him whatever Dorian was having.

“Not a great day,” Dorian confessed. “Some problems over at Magnolia.” He was too tired to go into the details.

“That doesn’t sound good.”

“No. Had to terminate my contract with them, in fact.”

Kent shook his head, as the waiter arrived with fresh drinks. “Sorry to hear that,” he said, his demeanour now more reserved.

“It’s all right,” Dorian replied. “I’m better off not working with them. They were doing some things that I had a, shall we say, professional objection to.” Dorian mentally cautioned himself not to get too far into the details.

“Hard to work with, huh? That’s a bit surprising. They’ve always been cordial when I’ve had to deal with them.”

Dorian raised his eyebrows. “You’re a customer?”

“Yeah. A couple of annuity policies. Can’t remember who I bought them from, but they’re with Magnolia now.”

Dorian’s pulse began to race. If Kent was a policyholder, then he could be one of the people that they were targeting to kill. Should he say something? Should he warn him?

It immediately came apparent how silly the situation had become. If he really believed his theory, then he would almost be obliged to inform his old friend. But he couldn’t imagine putting the words together. If he said anything, he would sound like a fool. And what is he was wrong? What would be the point?

Kent was now fumbling through his pockets, trying to locate his cell phone. “In fact, they’ve been sending me some interesting material. I’d been meaning to show you.” Finally, he

located his phone and pulled it out. "Check this out," he declared, as he cradled it in his hand, eventually handing it across the table to Dorian.

On the screen played a video, featuring an attractive young - *very* young – woman, who could pass for someone in their twenties. She was obviously computer generated, since you didn't see anyone that age anymore. She flashed a brilliant smile as she recited her lines, extolling the virtues of the Magnolia Life Company.

"...as well, we are pleased to offer a wide variety of services to our policyholders, to enhance your experience as a member of the Magnolia Life Family."

Dorian shook his head. He was never a fan of corporate attempts to make their customers feel like part of a family.

A series of phrases sprouted from behind the model: Enhanced medical coverage riders, preferred payment investment plans, account management services. But it was the last one that caught Dorian's eye. He cautiously rolled the cursor over the line that read "Exit Assistance", and clicked on it.

The backdrop colours quickly faded to neutral grays and yellows. A second young model appeared, this one brunette, as attractive and unrealistic as the first. Her voice was evidently more sombre. "At Magnolia Life," she intoned, "we understand that the challenges of advanced age can create significant hardships for our customers. Many who are on their own have no one to turn to, and must face their various health challenges alone. For this reason, Magnolia Life offers a service to make your decisions easier. By contacting an exit assistance specialist, we provide you with access to physicians who have experience in final decisions, ensuring that the choices you make are carried out discreetly and confidentially, leading to an efficient – and painless – solution to your end of life problems."

Kent sat listening, and twisted his mouth into an expression of confusion. "What are they talking about?" he asked innocently.

"Isn't it obvious," Dorian replied quietly. It didn't sound like a question. "This is clearly an invitation to assisted suicide."

Kent appeared mildly shocked. "Didn't look that clear to me," he mused.

Dorian didn't make eye contact. "I suspect that was intentional." A look of concern passed across his face. "You haven't given this any thought, have you?"

"No, not seriously," Kent replied. He then shook his head, turned away, and smiled. "But I tell you, some days..."

So the old men were right. They didn't murder anyone; they simply made it easy for their policyholders to do it to themselves. In a world where old age felt like an inescapable prison, he could see why it would be tempting to some. The notion that it would represent a profitable venture to anyone else likely never crossed their minds. And, indeed, why would it?

Strange days, Dorian thought to himself. Strange days indeed.

# No Love Sincerer

By Gregory A. Dreher, FSA, MAAA

I crept into the house. It was unusually quiet, with only the electrical hum of myriad appliances creating background sound. I slowly climbed the stairs, careful not to make a noise. I found my wife, Emily, in the master suite, putting on her makeup. From behind her, I reached and maneuvered a bouquet of roses in front of her. "Happy anniversary, honey," I said.

"A stranger, bringing me roses? Who could it be?" Emily turned, and acted surprised to see me, even though the mirror certainly gave away my presence. She took the roses and embraced me. "Happy anniversary!"

"The kids?" I asked.

"Spending the night at the Wilsons' house," Emily replied.

"The dog?"

"Outside."

"Perfect," I concluded. "I have reservations for two at Giovanni's in an hour. Let me change, and we'll be off."

Emily smiled. "Wonderful! There's nothing more romantic than an Italian dinner by candlelight."

\* \* \* \* \*

We drove to Giovanni's. Although located in a small space in an outdoor mall two suburbs over, once inside, the sights and sounds of the mall disappeared. The restaurant was quiet, and dimly lit. A delectable aroma, garlic and onion and herbs, greeted us. The hostess led us into the dining room, and seated us at a table for two, with a white tablecloth and red cloth napkins, lit by a single candle in an old wine bottle. She handed us each a menu, a single sheet of linen paper in a faux leather holder.

Moments later, our waiter arrived, bringing glasses of water and wine. "Welcome to Giovanni's," he said. "Would you like some time to look over the menu?"

I looked at Emily. "No, I think we're ready to order," I said.

"The chicken risotto," said Emily.

"I'll have the gazpacho, please," I said.

"Very good." The waiter nodded, and collected our menus.

Emily and I talked a little, and spent some time people watching. The restaurant was only about a quarter full, mostly couples like us. That was clearly the target for the restaurant, as it was set with tables for two, for the most part. One table had a group of six, almost certainly a group of friends out for a fun evening.

Finally, our meals arrived. Our waiter placed plates in front of us, on which rested narrow glasses filled with liquid, each with a hard breadstick sitting beside it.

Emily looked at her meal and sighed. "Jeff, it will never again be like the movies."

"I know, but I'll take living to 120 over the classics." I appreciated the classic 20<sup>th</sup> century movies as much as my wife, and so I knew how much food once meant to human society. But 21<sup>st</sup> century science demonstrated that calorie restriction was the



only way to truly extend human longevity. Like all American adults, and adults in most of the world, I have a chip implanted in my body, which tricks the brain into thinking the body is constantly satiated. Thinking back to my youth, it reminds me more of the feeling I got when I ate too much.

Our nutritional needs are provided by a liquid diet, five nutritionally balanced supplements, with a small amount of solid, fiber-rich food. There are some two dozen standard flavors, but they can grow tiresome. Restaurants like these arose, to cater to adults. Their recipes provide the same nutritional needs in their own flavor formulations. I took a sip of my gazpacho. The spicy chilled tomato flavor was a welcome change from the formulas I've consumed almost every day for the last twelve years. And the breadstick, made with fresh rosemary, was also tasty. I didn't really have much of an appetite, but I was enjoying my meal.

I finished my gazpacho, but Emily was still working on her risotto. Her formula could only be charitably called risotto, with a consistency like thin gruel, but it still smelled good. She took another sip, and set the glass down. "You know how some people say restaurants help stimulate your appetite? I just don't see it."

"You mean, people like me?" I replied. "I like the aromas here. They really make me think 'Italian restaurant,' even though I haven't eaten real Italian food in years. Although to be honest, I think it's the alcohol that really attracts people to restaurants nowadays."

"Sure, but I still don't have much of a desire to eat." Emily's concern about never wanting to eat is a problem shared by many adults. Still, knowing it was important to stay properly nourished, she eventually finished her meal. Afterwards, we departed. A classic film showing at the restored theater downtown was the start of that evening's entertainment. When I was younger, Emily and I would celebrate our anniversary with a week's vacation to some nice, warm weather locale, the perfect escape from November's chill. Now that we have kids, we don't have that freedom, but at least we have tonight.

\* \* \* \* \*

The next morning, I walked the two blocks to John Wilson's house. John also works for the federal government, but where I'm an actuary and demographer, he's one of the systems guys. Coincidentally, he lives in the same neighborhood, and our sons Sam and Shawn are good friends with his son Josh. I knocked, and he answered the door. "How was your evening?" John asked, with a knowing smile.

"Good, good. I just wanted to stop by and make sure everything's okay," I said.

"Everything's fine. The kids are welcome to stay until this afternoon," Joe said.

"That sounds great," I said. "Give us a call when they're ready."

"Will do. See you at the office Monday," Joe said.

I laughed. "Sure thing."

The next Monday, I was back at the office. And by "office," I meant the computer in my home office. With the ever-increasing costs of oil and other liquid fuels, someone finally realized that eliminating commuting was one of the simplest steps to greatly reduce fuel consumption. Telecommuting and teleconferencing replaced the office for most traditional "office workers," and that's been the way things have worked for nearly a century. In a typical week, I only drive into the office on Tuesdays.

My next project at work was updating the mortality tables. We demographers have been tracking the impact of the calorie restriction diet on old age survival rates. As people have spent more and more of their life away from excessive eating, we have observed a gradual increase in life span, with the most dramatic impact being the drastic reduction of deaths from heart disease, but cancer deaths have also decreased. Most non-accidental deaths today can be described as dying from old age. Our diet has helped us reach our maximum life span, but that maximum remains very real. A side effect of the focus on society away from eating has been the lessening of teenage obesity rates since their peak early in the 21<sup>st</sup> century. Researchers have long debated as to whether or not that would have an impact as this cohort reached old age.

With the project scope in mind, I logged into my computer... and found the network down. All this focus on helping people work remotely, yet these network issues still haven't been eradicated. Fortunately, I kept copies of last year's population databases, so I used them to set up the queries I would use for this project. As an added bonus, I could work the day without being interrupted by e-mail and v-mail. Sure, the network would likely be back up in a couple of hours, perhaps more if someone needed to drive onsite to fix it, but I was happy for the chance to "get so lost in my work, I forgot to check to see if the network was up." I planned on transferring the work I finished off-network once I got back to the office.

\* \* \* \* \*

22.666. I chuckled as my favorite string of numbers showed up as the prior year's estimated life expectancy from age 80 for people born in my state, Virginia. I continued to review my results, but something was bothering me. Finally, it came to me. Why didn't I see that number before? It was based on the old data, not the new data, so I should have seen it in the queries I ran yesterday. As a native Virginian, I do like to check the statistics related to my state. What actuary doesn't calculate how long he's expected to live? Since I was at the office, I couldn't check my queries at home, but I added the 2114 databases to a flash drive, so I could compare them to the 2113 databases at home.

I checked my queries. Nothing in the queries looked different, but a number of results did look slightly different. I performed a series of checks. The databases were the same size. The number of Virginia natives was the same. But in the new database, there were more Virginians listed as born in 2020 to 2029. I have long encouraged immigration to my state, but this wasn't what I had in mind. A more thorough search revealed a pattern to these differences. The number of people born in more recent decades was down, with more people showing as being born in the 2010s, 2020s, and 2030s. Strangely, figures starting in the 2070s were unchanged.

Later, I raised the issue with my supervisor. "We're entirely dependent on the data we receive from state governments and multiple federal bureaucracies. Frankly, I'd be surprised if there weren't some changes each year," explained Heather Morton. "How did you notice this difference?" she asked.

"I started this project one day when the network was down, using the database from last year I still had on my computer," I said.

“That’s not a bad idea, to keep backup data, as long it’s not at the individual level. Don’t want to attract any privacy concerns,” she mused. “Now, are you seeing any material differences?” she asked.

“No, it’s a small number of questionable records. The results look just like we expected,” I replied.

“Then I wouldn’t worry about it. I can understand your concern when data changes like that. I hate it too. The ancient actuaries of Sumer were probably wondering why the count on their cuneiform tablets changed, too.”

I laughed. “Is it really too much to ask for perfect data?”

“Get in line behind the people looking for the perfect husband or wife,” she said.

“Or the perfect boss,” I added.

Now, it was Heather’s turn to laugh.

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Afterwards, I continued work on the annual mortality study. In my spare time, I checked a few other old databases I had on my computer, and discovered that the differences I observed were isolated to 2113. As the year neared its end, we finished the preliminary study. Our initial statistical analyses were complete, and the reports were files. About a year later, I’d expect to see a headline-grabbing study by some university, making heavy use of our data, but our work would remain anonymous.

In fact, Heather brought up one such study topic. “I’ve noticed the higher mortality rates in rural states in this year’s study. It preserves the relationship we’ve observed for decades. Do you think we’ll see another story about how rural residents are secretly keeping up the old ways of eating?” That’s a constant debate. No one is forced to adopt the calorie restriction diet, but the high taxes on real food and peer pressure are additional strong motivators to adopting the diet. Those reasons, plus the promise of twenty more healthy years of life, have led to almost universal acceptance of the diet.

“It’s possible,” I replied. “But then we’ll hear the same counter-arguments. It’s genetics, they’ll say. Or they’ll say it’s more difficult for them to see doctors face to face, compared to everyone in New York City.”

“I lived in New York City,” said Heather, “and you wouldn’t believe how difficult it is to find a doctor that’s accepting new patients.”

“In any case, there’s really not much of a point to making this argument. Small town types, especially Southerners, are likely to complain that the big city media types are looking down on their lifestyle again. That’s especially true when they speculate about ‘eaters’ with absolutely no evidence. Do you think anyone’s going to open Al Capone’s vault and find a buffet restaurant?”

“What?” replied Heather, quite confused.

“Oh, just a famous case of media hype that turned into nothing. It’s from a long time ago,” I explained.

“Anyway, the genetic factor is real,” said Heather, getting back on topic. “Children in America are fully nourished, but they grow to different heights; people still have different body shapes, and the best predictor of your longevity is still the longevity of your parents. We shouldn’t make wild speculations. Let’s leave the furious rants to the normal batch of commentators.”

I thought about a few of them, and their argument that people eating normally would destroy the health care system. “Yes, but without wild speculation and furious rants, you don’t sell papers or ad time.”

\* \* \* \* \*

That Saturday, my family and I went to a Christmas party, hosted by the Wilsons. Their house was beautifully decorated for the season. The Christmas tree shone warmly, with multicolored lights reflecting off gold and silver tinsel. The tree was fake, but they used a pine-scented spray to mimic the real thing. In the kitchen, though, the aromas were real. For the large number of children present, the Wilsons prepared a traditional Christmas feast: turkey, potatoes, yams, even Christmas cookies. (“They’re made with sugar and fat substitutes, so they’re okay,” explained Brittany Wilson.) They brought in formula from a local restaurant for the adults.

“Now I can see why the kids like coming over here for dinner,” said Emily.

“Yes, the Wilsons sure care a lot about cooking,” I said. Neither Emily nor I cared enough to learn how to cook like they did in the movies. It’s just more convenient to use prepackaged foods.

Later in the evening, we all gathered in the living room. There were small gifts for the children, and a gift swap for the adults. I took a seat near the gas fireplace, which wasn’t turned on; it wasn’t that cold outside. The mantle was covered with Christmas cards, with more taped on both sides of the fireplace. One of those cards looked familiar; I had received a card with the same picture from my supervisor. I peeked inside, and sure enough, it was signed by her. “‘There is no love sincerer.’ Merry Christmas and God bless, Austin, Heather, and Kayla Morton.”

The kids opened their gifts first, and while they were entertained with their new toys, we adults had fun stealing each other’s gifts during the gift exchange. We chatted a while longer, but it was getting late for the younger children. We thanked John and Brittany for a wonderful evening, and walked home.

That night, I mentioned my discovery to my wife. “Did you know my boss knows the Wilsons?”

“That’s surprising. John doesn’t work on your floor, right? Maybe he set up her computer?” Emily wondered.

“I don’t know. That’s possible. I mean, it was just coincidence that I discovered that John worked in the same building as me,” I said. “And apparently, she’s a lot more religious than I thought,” I added.

“What do you mean?” she asked.

“The cards my coworkers and I got had a generic ‘Happy Holidays’ message. But she put a different message in the card she sent to John and Brittany. It said God bless, and also ‘There is no love sincerer.’”

“A Bible quote? I don’t recognize that one,” said Emily. “It really sounds more like something from an Easter sermon.”

I nodded. “Maybe I’ll look it up later. It wouldn’t hurt for me to review the Scriptures.”

\* \* \* \* \*

When that mystery quotation popped back into my head, I checked an online Bible site, but couldn't find that quotation, in any of the translations. Then, I realized how foolish I had been, and just entered the quote into a search engine. The only thing that came up was a line from an old George Bernard Shaw play. The full quotation was "There is no love sincerer than the love of food." I would agree that the Wilsons loved food, but what purpose is served by putting just half a quotation on a Christmas card? It seemed so very random.

Later, I had an inkling, and decided to check some past work. I retrieved an old external hard drive from the closet and plugged it into my laptop computer. I found the old population databases going back to 2108. I wanted to confirm that the anomalies I observed were really limited to 2013. They weren't. Soon, the pattern became clear. The inexplicable changing of birth dates, moving the birth years some twenty or thirty years earlier, had been going on for at least five years. But what was more worrisome was that I didn't see it when I looked earlier. Somehow, someone had altered the files stored on my desktop computer.

Some further research uncovered something even more disturbing. For every person whose birth date changed in a given year, the Social Security database listed that person as having died that year. I didn't think it could be something fraudulent; the changes I observed wouldn't alter one's benefits. I needed to learn more about these people.

My first surprise was that these individuals were not randomly distributed across the country. Rather, they were typically residents of large cities and their metro areas. Quite a few were from the Washington area. I summarized the Social Security numbers of the Washington residents whose birth dates had changed in 2013 and 2014, and found their names. There were 31 individuals in total. To learn more about them, I started with the obituaries. I found that most of them had obituaries in the Times-Post. I grumbled as I paid the nominal fee to access the archives. All the obituaries confirmed that the original birth dates were correct, and these individuals died incredibly young, some even in their sixties! But then, some of the obituaries hinted at an accidental death.

I was still digesting what I had learned the next day, when the phone rang.

"Hello?"

"Jeff Trotter?" asked an unfamiliar female voice.

"This is he," I replied.

"Alicia Dunaway, from the Times-Post. I'm calling to check on your satisfaction with your recent transaction with the Times-Post."

"I have no complaints," I responded.

"How would you rate the ease of navigation of the newspaper's archive features?"

"Very easy. I only wish it was free," I griped.

"Was your transaction for business or personal use?" she continued.

"A little of both... just put down personal."

"What do you mean, both... I mean, what type of personal use?"

"It was research..." I stopped. This woman wasn't asking for numbers. I couldn't remember one of these polls being conducted without using a 1 to 5 scale. Something was fishy.

There was silence on the phone. Finally, Alicia spoke. “Look, this isn’t a customer service call. I’m a reporter for the Times-Post, and I want to know why you’re interested in Anne Garmin.”

“I’m not, well, not specifically. Like I said, I was doing some research, and Anne Garmin’s name was one of several I found.” I paused. “Why are you interested in Anne Garmin?”

Alicia hesitated. “Anne was a dear, dear friend of mine, taken from this Earth far too soon. But she did not die in an automobile accident, and no one will tell me why they say she did.”

I looked up the article I downloaded. The obituary did suggest she had died in an accident. She was only 67 years old. “Why did you contact me? Was she murdered?” I asked.

“Let’s talk about that later. Tonight, 6 PM, Gerber Park?”

“Okay,” I replied. The reporter hung up quickly.

\* \* \* \* \*

Gerber Park was a local park in town, about a mile from where I lived. I would normally walk there, but I took my car, just in case something bad happened. Having watched many classic mysteries, this did feel like the setup for one. I had confirmed that Alicia Dunaway was the name of a Times-Post reporter, and the phone number she had called from was one of the paper’s numbers. Still, I was a bit worried. I arrived ten minutes early, and sat down on a bench, within eyeshot of the parking lot. It was already dark, and a little chilly; not surprisingly, I was the only person present.

Another car pulled up and parked. A lone woman stepped out of the car. She was probably in her thirties. She carried a purse and a file folder. She saw me, and approached. “And you are?” she asked.

“Jeff Trotter. You?”

“Alicia Dunaway.” She opened the file folder and showed me some photographs, of her and an older woman. I recognized her from the obituary. “Anne Garmin was like the mother I never had, growing up. She watched me while my father worked. She taught me how to quilt. She was always there when I needed a woman to talk to. After leaving school, I still saw her several times a year.

“It was a week after Mother’s Day, last year. She paid a visit to me, but left early, complaining of feeling ill. My last contact with her was a message, saying she was going to the hospital. Two days later, her nephew contacted me, sharing the terrible news that she was in an accident, and died. I asked about her sickness, and he said he didn’t know anything about that.”

“Did she get into an accident on the way to the hospital?” I asked.

“No. I learned she did check into First Methodist that night. I couldn’t see her medical records, of course, but I... used an outside consultant to get a copy of the records.” Alicia passed me a sheaf of papers.

I looked at the records. “It looks like she died of a heart attack. There’s no mention of trauma.”

“Yes!” she exclaimed. “But her family isn’t acknowledging that. I wanted to know what really happened, but I had no leads to investigate. So, I flagged Anne’s

obituary. And when you looked at it, I was notified. I wanted to know why you looked up her obituary, so I contacted you.”

I showed one of the papers from Anne’s medical files to Alicia. “Did you know she was born in 2023?”

“No, she wasn’t...” she said, trailing off as she finally saw what I had noticed. “That’s not right! I was there when she celebrated her 67<sup>th</sup> birthday last year. Her birth date should be....”

“Her birth year is 2047,” I stated. “And that’s how I came to look up her obituary. I work with the Social Security database, and other population databases, and before 2014, that was her birth year on file. But sometime that year, her birth year was changed to 2023. Based on what I’ve seen, I think it was changed when she died.”

“There’s no reason to lie about how you died, or when. Just because you died young, or from a rare disease... these things happen. It’s nothing to be ashamed of,” said Alicia.

“Maybe it is,” I mused. “You would feel ashamed if you were doing something you shouldn’t. It’s not like people haven’t lied about their cause of death before.” I thought for a moment. “Probably the best example is from the late 20<sup>th</sup> century. Some people tried to write off illness as from a mundane source, like cancer, when they were dying of complications from AIDS. They had kept part of their lives a secret, a secret they tried to keep even in death. Most people today don’t realize how scary a disease AIDS was once it was first isolated. There was no treatment, and it single-handedly dropped the life expectancy of one affected group to Third World levels.”

I thought for a moment. “On the other hand, if the reported age at death had been in the 60s, there wouldn’t have been any impact on life expectancy. Like today, deaths of people in their 90s and 100s aren’t out of the ordinary. That must be it.”

“What must be it?” asked Alicia.

“The reason for the change in the birth date. Really, the only reason to lie about your cause of death, and age of death, is because you want people to believe you’re normal. A normal, red-blooded, food-eschewing American.”

“You think my dear friend was... an *eater*?” Alicia gasped.

“She may have been. Not that there’s anything wrong with that, as long as you accept the risk, and as long as you don’t lie on your insurance application.” Life insurance is considerably more expensive for those who don’t abide by the calorie restriction diet. “What’s more worrisome is that there appears to be a conspiracy at work. Someone is trying to hide these premature deaths.”

“No one thinks people in the big city ever eat food, outside of children and pregnant women. But there’s nothing stopping it from happening,” Alicia said. “Restaurants that cater to families prepare food all the time. Plastic surgery, liposuction, can conceal the visible signs of overeating; you’d just need a sympathetic doctor. If you work at it, no one would notice you were secretly eating, until you die young. And they won’t think twice about you dying young from an accidental cause.

“There have long been rumored clubs of those dedicated to preserving the old ways of eating,” she continued. “No one has ever found one of these clubs, though. Not that we reporters haven’t tried.”

“Would it be like the sitcom portrayals? People huddled in a dark room, shoving food into their faces, watching ancient recordings of cooking programs?” I chuckled.

“You may laugh, but those portrayals would be effective camouflage for a real-life eating club. Make someone think something exists only in fantasy, and they may not notice the signs of it in reality. A club like this could exist in our town right now!”

Alicia’s thoughts seemed to race. She smiled, as if foreseeing a path culminating in a Pulitzer Prize. I shook my head. “Look,” I said, “I hope I’ve answered your questions. I really don’t feel strongly about people who still choose to eat. It’s their choice, and that choice is not my concern. But please, if you do find some hypocrites, please reveal them for what they are. I’m not sure how you might find these eaters, but I think they’d agree with George Bernard Shaw: ‘There is no love sincerer than the love of food.’”

With that, I departed. If this reporter wanted to confront her friend’s family and try to get the truth, that was her business. If she wanted to write an exposé about people who eat in secret, I probably wouldn’t read it. It has no impact on my life. Let them live as they want. It’s like I discovered when I first found those anomalies in my work: these secret eaters made no material difference.

\* \* \* \* \*

“Would you look at this?”

Emily called me over to the computer. She had found a video clip online. It looked like hidden camera footage of a group of adults eating, congregated around tables near an active kitchen.

It had been months since I had met Alicia Dunaway and talked about my suspicions that there was a secret group of people eating. I still had suspicions relating to some people I knew, but I did nothing with them.

“I really don’t care,” I said, and I started to walk away.

“No, you need to see the start of this video,” urged Emily. She restarted the video, and I watched as a building came into view. The camera holder proceeded to walk around the back of the building, where he or she entered a basement room.

“No way, that can’t be...” I started. “Was that Giovanni’s?”

“It was,” Emily replied. “On our anniversary, we were literally atop a secret restaurant.”

“I never would have guessed,” I said. “But at least now I know why that restaurant smelled so authentic!”



## Picture This

by Walt Herrington

"I've always had a vivid imagination," Bob said.

He made this comment just as Tricia took a sip of her beer, and she sputtered and choked. I helped her mop up the mess with my napkin. Bob smiled tolerantly and insisted, "No – I mean it."

I could see why Tricia had laughed. Though I didn't know him well, Bob seemed dull, even for an actuarial student. It was unusual for him to join us after work, and I had wondered if he had ever been in a pub before. But he acted perfectly at ease, even ordering beer, which he drank slowly. Most of the other actuarial students who had just finished a round of exams were apt to let off a little steam and I thought Bob might not like it, but he had sat smiling and laughing, until he had dropped his verbal bombshell.

"What do you mean?" I asked.

"Maybe he means he thinks he passed his exam," contributed Asok. "Even thinking I might have passed mine would require more imagination than I've got."

"It might help on the exams," said Dave. "Let's see – You are the staff actuary at a small regional life company, and discover that the company administrative system is incorrectly calculating \$7702 guideline premiums. You must explain to the CEO, the CFO, and the Board of Directors..."

"Knock it off!" Asok said. "I don't want to think about \$7702. It gives me a headache."

And so the conversation had ebbed and flowed, and I never did find out why Bob thought he had a vivid imagination. But a few days later I ran into him on break and repeated my question.

"Well," he answered, "I've just always had one." This wasn't much of an explanation, so I asked him to elaborate. He shrugged, a little uncomfortable, and replied, "Just, you know, when I was a kid – I never had a lot of friends. I would create my own kingdoms, fly on dragons – that sort of thing."

"But every kid does that," I said. "Or used to. I wonder, do the computer games today help or hinder imagination? But anyway..."

"Well, one thing I always enjoyed as a kid was looking at pictures – you know, pictures in books – and imagining myself there where the pictures were made. I spent hours doing that. I would

tell my folks about my imaginary trips, about running into people who spoke strange languages or wore funny clothes, about seeing exotic animals. And the adventures seemed so real. I can still remember some of them vividly.”

“I don’t ever remember doing that in particular,” I said, “although I think I had a vivid imagination too. I don’t know how often I fought the battle of the Alamo, for example. But I admit I never imagined that I heard Santa Ana speak Spanish – just English with a Spanish accent. Did you ever take an imaginary trip to the Alamo?”

“No,” he said. “As I recall, I only did it with real pictures – photographs, I mean. I tried with like paintings, but it wasn’t the same. So no Alamo, no Paul Revere’s ride, nothing prior to photos. Or are there photographs of the battle of the Alamo?”

“I don’t think so. Actually, photography began in the 1820s – the earliest photo I remember was one made in 1826. So the Alamo *could* have been photographed at the battle, but I don’t think it was. But do you ever do this picture travel thing anymore?”

Bob shook his head. “Nope. ‘When I was a child’ you know. I probably haven’t done it since I was 7 or 8.”

I smiled. “It could come in handy – and save money too. Instead of that trip to the beach, just get a book on Hawaii, sit back in your easy chair, and travel without spending a dime – except for the tan in a bottle to fool your friends.”

I was surprised at the startled look that spread over Bob’s face. “You know,” he replied, “I never thought of that. That would be a good way to relax. I might give it a try.”

“Well, let me know how it works,” I said. “If you’re successful, maybe we could start a mind travel agency and ditch this rat race.”

It was a week or so later before I had a chance to ask Bob about his picture adventure. He shook his head regretfully. “No, nothing,” he said. “I just stared at the picture and nothing happened.” He reddened a little. “Actually, I nodded off. I’m so used to trying to memorize everything I read that when I just look at something, well, I guess I fall asleep. The perils of being an actuarial student, you know.”

“I know what you mean,” I commiserated. “I read a mystery novel last week and kept making mnemonics to remember who the suspects were.” Then a thought struck me. “What triggered your comment that night at the pub? Was it something someone said?”

“No, I don’t think so. It might have been the fact that I had had a couple of beers. I usually don’t drink. Prior to that night it had been several years since I had a beer.”

“Then maybe you need a drink before you try the picture thing,” I retorted, and went back to my office.

I sat at my desk, and a calendar from a reinsurer caught my eye. I leafed through it idly, pausing at a picture of snow covered Alps. On impulse, I leaned back in my chair and concentrated on the picture, willing myself into the alpine meadow. Nothing happened. I closed my eyes and concentrated harder, but I was still in my office when I opened my eyes. It was worth a shot, I told myself. But enough of kid’s games; I put the calendar aside and picked up a report.

Just then my phone rang. “Jeff Thompson, product development,” I said as I answered. For a moment, the person on the other end of the line didn’t speak, and then she said “Jeffrey?” I sat up straight – the voice was that of my sister Marcia, but she sounded muffled, like she had been crying. “Marcia? Are you OK?” I asked.

“Oh Jeff,” she said. “I just got word that Dad has passed away.”

I sat stunned, and finally asked in a choked voice, “When – when did it happen?”

“Last week. I don’t really know the details. It’s been a few months since I saw him. He looked fine then. Aunt Chloe called to let me know a few minutes ago. The funeral was last week, too.”

“Are you OK?” I repeated. She said, “Yes, mostly. It was just a shock. And I couldn’t even go to the funeral or send flowers.” She was crying again.

“Look, sis,” I told her, “I’ll pick you up from work in about 15 minutes. I’ll call you when I get to your building.”

“OK” she said. I hung up and sat for moment, my thoughts whirling. Dad dead! I hadn’t seen him in years, but it was still a shock. And the last time I had seen him had ended badly. I had blamed him for the divorce, and had told him so, loudly and at length. He hadn’t tried to defend himself, but just sat there sadly, and I shrugged off the comforting hug he had tried to give. That was the last thing I ever said to him, I recalled bitterly. Time had healed my hurts, and I had matured too. I didn’t blame Dad anymore – but I had never told him. I had never even picked up the phone and let him know that, and that I was proud of him. And now he would never know. I got up heavily and headed for the door.

I did not return to work for a couple of days. Marcia and I had driven over to Bygate and had gone to the cemetery where Dad had been buried. I had said a prayer at his grave, and had tried to apologize to his spirit, but it was scant comfort. We had also seen Aunt Chloe, Dad's sister, and she had given us some mementos of dad – some of his books, a recent photo, his pocket watch, a copy of the obituary in the paper, and so forth. I had brought the photo to work to put on my desk and was looking at it when a knock at my office door jerked me back to the present. I looked up, startled.

"Hi, Jeff," Bob said. "Sorry to hear about your dad."

I smiled. "Thanks, Bob."

"Hey, I took your advice," he said.

I was confused. "Advice?"

"Yeah, remember, you said I should have a drink before I tried to the picture thing."

"Right," I said, not adding that I had been joking. "So did it work?"

He nodded. "Worked like a charm. I even got a book on Hawaii, like you said. It was real nice. I didn't try the tan in a bottle idea, though."

"Maybe, if you do it often enough, you could get to the point you could do it without the drinks. I'd hate for you to fall down a picturesque mountainside because you were sozzled." We both laughed, and Bob left.

A few weeks later I was passing by Bob's office when I heard a sharp cry. I paused outside his closed door, then knocked. "Bob? You OK?"

He opened the door, looking a bit uncertain. There was a red mark on his forehead and cheek. "What happened?" I asked. "Did you fall out of your chair?"

"I – I'm not sure," he said. We both stood there, and then abruptly he closed his door again. I went back to my office. What's up with Bob, I wondered. I hadn't been back long when I heard a knock, and when I looked up Bob was standing at my door.

"Hi, Bob," I said.

"Can I come in?" he asked. He didn't wait for an answer, but stepped in, shut the door, and stood against it looking a bit wild.

“What on earth?” I asked. Without speaking he left the door and sat on the couch. I could still see the red mark on his face, and it looked like he had the beginnings of a black eye. We just looked at one another until he blurted, “It actually works!”

“You told me that already,” I said, bewildered.

“No, I mean it *really* works. I mean I was really there.”

“Where?”

“Inside the photo.”

“What do you mean, inside the photo?”

He took a deep breath, and said slowly, “I was inside the photo. I mean I was there. It isn’t just imagination; I was really there where the photo was taken.”

He looked at me, but I wasn’t sure what to say. Had Bob been studying too hard? I guess my doubt showed on my face, for he said insistently, “Look. I mean it. I was there.”

“Have you been drinking?”

“No! Not at work. And it’s like you said – I don’t need a drink to do it anymore.”

“Well, you said you had a vivid imagination. I can see how, by concentrating on a picture, you might get the feeling like you were at the scene...”

“No!” he repeated vehemently. “I was there. Physically.” He touched the mark on his face. “I got this there.”

Again I tried to soothe him. “Now, Bob, you probably just like fell into a trance and, and fell out of your chair, or anyway hit your face, and that woke you up, and I can see how you could think...”

Bob took a deep breath. “Look – do me a favor, will you?”

“OK,” I said doubtfully. “What is it?”

“Pick 10 items at random and put them on your kitchen table tonight. Then take a picture of your apartment, but don’t show the kitchen table, and bring the picture to work tomorrow.”

“Why?” I asked.

“So I can substitute facts for appearances and demonstrations for impressions,” he answered.

“OK,” I promised, and with that Bob opened my office door and marched out.

Even though I still thought Bob was crazy, that evening I put 10 items on the kitchen table and then took a picture of the living room. I had it printed out when Bob came to my office. Wordlessly I gave it to him, and just as wordlessly he took it and disappeared. In about 30 minutes he was back. “Sorry,” he said. “I would have come back sooner but I had to field a phone call.” He handed me a list, and the items on the list corresponded exactly with the items I had put on the kitchen table. “Am I correct?” he asked defiantly.

“Well, yes, but how – did you go to my apartment after you left here?”

“No,” he exploded. “For one thing I wouldn’t have had enough time. And how would I have gotten in? Ask the secretary – she’ll tell you I never left my office.”

“But ... but then how did you know?”

“I told you. I took the picture and concentrated, and suddenly I was there in your apartment kitchen.”

“But the picture was of the living room.”

“You could see the doorway to the kitchen. So that’s where I went.”

“So you traveled somehow to my apartment this morning by looking at that picture?”

He shook his head. “No. It doesn’t work like that. I was there *last night*, at the moment the picture was taken. I could hear you in the living room. I jotted down a list of what was on the table and left.”

“But how did you get there? And what do you mean, ‘you left’?”

“I don’t know what happens exactly,” he said exasperatedly. “I’m an actuary, not a physicist.” He touched his face. I had been right; the red marks had faded but he had a fine black eye. “I got this yesterday doing the picture thing.” He blushed. “I, well, it’s embarrassing.”

“What did you do?”

His blush deepened. He cleared his throat. “I had gotten my Sports Illustrated, and it was the swimsuit edition, and I, well, there was this one picture...” He stopped because I had suddenly erupted into laughter. He chuckled feebly.

“So you went back to this photo shoot...”

“And there was this one guy who saw me, and he took a poke at me.”

“Why? What was going on?”

His blush deepened. “It was ... she was ... well, evidently I wasn’t supposed to be there.” I laughed again, and he laughed too this time. “So you believe me now?” he asked.

“Well,” I considered. “I don’t see how you could have known what I had put out on the table, unless you got in or...”

“But I did get in, I told you, by way of the photograph.”

“But how?”

He shrugged. “I don’t know how. It just happens.”

“But do you physically go there? Do you like disappear, and then suddenly you’re back again?”

“As far as I can tell, it takes virtually no time. Like a blink, or something. I mean, I’ve spent hours at some locations, but no time seems to pass here, because it’s the same time when I finish.”

“So could you do it now, here in my office?”

He considered. “I could try. I’ve never done it with anyone actually watching. Let me have that magazine and I’ll try.”

“Let me choose the picture,” I said. I paged through the magazine and stopped at a picture of frenetic trading on the floor of the Chicago commodities exchange. “Here. Go here and bring back something in the picture.”

He took it doubtfully. “I’ve never tried to actually bring anything back,” he said. He sat on the couch and concentrated on the picture for a moment.

“Well?” I asked. “I don’t see anything.”

“I can’t concentrate with you watching,” he snapped. “Let me go back to my office and try.” But my eye had fallen on the photo of my dad, and I grabbed his arm. “No. I’ve got a better idea. And this time you’re going to take something with you.” And I told him what I wanted.

I sat nervously in my office. In just a few minutes Bob was back. He carried the picture of my dad, but he also carried something else – a sealed envelope with my name written on it. With shaking hands and blurred vision I took the envelope and opened it. As I read it I cried, tears

streaming down my face. *My dear Jeff, it began, I enjoyed meeting your friend Bob and appreciate the wonderful note you sent. I love you too, son, and I'm proud of you too. I haven't tried to contact you since our discussion, but I've followed your career. I wish I could say more, but Bob said he only had a moment before he had to leave. So I'll end this note now and repeat that I love you. I'll give you a call in the next day or so and maybe we could get together. Love, Dad.* The note was dated the day before he died. As I sat crying, Bob silently left the office and gently closed the door behind him.

The next day on break I went down the hall to Bob's office. He was there, and we looked at one another, but I couldn't find the words to say. He said soberly, "I'm glad I was able to help. You OK?"

I nodded, still speechless. He leaned back in his chair. "And mum's the word, OK?" Again I nodded, and this time smiled as I added, "Who would believe me anyway?" Then I asked, "So what are you going to do with this ... this ... *talent* other than take cheap vacations?"

"I'm not sure," he replied, "but I can tell you that I'm going to be *really* careful about what pictures I look at." Suddenly he snapped his fingers. "I've got it! If I can get a photo of the SOA exam offices taken after they get the exams printed, I can go there and get a copy of my next exam. That ought to speed up my exam progress."

"There's got to be some rule against that," I commented. "Not to mention the fact that it's just wrong. And needlessly complicated. All you need is a picture of your desk with all your study materials at your apartment. You get the exam, see what the questions are, focus on the picture, and voila! You are closeted with your study materials with as much time as you need to look up the answers."

"Damn! Great idea," he said admiringly, then grinned. "I was just joking. Mostly. Anyway, could I use this talent here at work, I wonder."

We sat silently for a few moments, considering possibilities. I finally shook my head. "Nothing occurs to me. We're concerned about the future, not the past. Now, if you could travel to the future, you could make stunningly accurate assumptions. Shoot, you wouldn't need to do stochastic projections – no, I guess you would, since PBA requires it, and there's no exception for time travel."

"To hell with models," he said. "If I go to the future I would start an investment company and pwn Warren Buffet." Suddenly he looked startled. "Do you suppose," he asked slowly, "that that's why Buffet is so successful? After all, if I can go *back*, maybe he ..."



“Who knows?” I responded. “But even he has his share of flops.”

“But maybe he includes them on purpose, so no one would guess,” Bob argued. He stopped as another thought occurred to him. “Hey, I wonder if I could change things when I go back.”

I shook my head again. “No way. I’ve thought about this. It seems to me ...”

“You mean you spend time thinking about time travel?” Bob interrupted. “And I thought I was a nerd.”

I continued, ignoring his comment, “It seems to me that Hitler is proof that the ability to change the past is not possible.”

“What?”

“If someone could go back and change history, Adolph would be the number one candidate for change. Since he has not been deleted from history, ergo, changing history is impossible.”

Bob looked confused. “Hitler? Hitler? Who’s he?” Then he grinned. “Sorry. I know I’d never be able to keep a straight face. Anyway, I guess you’re right. But none of this answers my question – what can I do with this ability?”

“Not much here at work,” I replied, “except take interesting breaks.”

“I guess not,” he said thoughtfully.

A week later Asok poked his head in my office. “Have you heard the news?” he asked. “Bob’s leaving.”

“Leaving? Where is he going?”

“On his own, I think. Anyway, thought you might like to know.”

I went down to Bob’s office. “I just heard you’re leaving,” I said.

“Yeah,” he said. “I’ve thought a lot about this talent, and what we talked about, and, well, I’ve decided to try to put it to use. I can’t really use it here. But there are probably a lot of people I could help, you know.”

“Like you helped me.”

“Yeah.”

“But how will you do that? Start some sort of detective agency or something?”

“I don’t know – yet. But there has to be something I can do. And I have considered a detective agency, or historical research. ‘Was there really a sniper on the grassy knoll’ type of question.”

“It could be dangerous,” I warned. He nodded. “Yeah, I’ve thought of that too, especially after that poke in the eye I got. And I wonder, in retrospect, how in the world I never got in trouble when I did this as a kid.”

“‘God looks after fools and children’ – isn’t that how the saying goes?”

“In that case, I guess I’m still covered.”

“You know, you’re right,” I said suddenly.

He raised his eyebrows. “About being a fool?”

“No. What you said that night at the pub. You do have a vivid imagination – and a good sense of humor too.” I held out my hand, and we shook. “Sorry to see you go, and thanks again. Good luck, and keep in touch – although I think you’ll be hard to miss if you do what you plan to do.”

“And in any case,” he added, “I’ve always got this actuary thing to fall back on.”

## The Gaming Actuary

by Marilyn Dunstan

It had been one slippery slide down the icy streets of fraud and mismanagement. Now the economy was settled at the bottom, gasping for air. The great insurers had been sorely challenged by the collapse of Fannie and Freddie and the credit losses that rippled in their wake.

The consolidation that took place sent many a desperate actuary out onto the employment lines.

It was thus that Ben Sayers sat at home during his 60 day notice period, hopefully searching monster.com for another actuarial position while the typical Seattle rain steadily fell outside.

He had a good, diversified background, possessing both a Fellowship in the Society of Actuaries and the Casualty Actuarial Society. However the firm that purchased his company thought he was overqualified and too expensive in a day and age where the bottom line was cutting costs without respect to long term value.

The listings he found were typical, and most were below his level of responsibility. Consolidation had brought a thinning of the higher level positions. Then one stood out. Gaming Actuary.

“Gaming Actuary”? He shook his head. This was something new. He continued reading.

Quantum Designs. Needs actuary with P&C and Life background. FSA, CSA preferable. Background shall include risk management, investments and capital management experience as well as experience in marketing, product experience and gaming experience. Experience will be used in developing advanced gaming system.

The salary was excellent, reflecting the technology background with due appreciation of the actuarial skill set required.

Ben moved over to his PC and Goggled Quantum Designs. To his surprise a stark black screen appeared with a muted bell curve subtly etched in the background. It was an exercise or an intelligence test for the seekers. He scrolled his mouse along the curve and as he navigated he unearthed various portals on Quantum Designs' website. They appeared to be distributed along the curve in some order. At the apex of the curve he found “Games”. He clicked and entered a new screen with the same background and found “Virtual Earth” at the tip of the apex of the curve. The screen

opened again to a photo of earth taken from outer space, glistening in a black field of stars.

Ben had some, but not a lot of game playing experience. He had delved into the roles of avatars, fought to save the earth and emerged to study for yet another actuarial exam. However, he hadn't spent much time gaming because his actuarial work had been so encompassing. Still, he was interested in this unique position. He didn't think fellow actuaries had that much time for game playing either so he'd be competing on an even field.

Ben was ready for something new. He picked up the phone and dialed.

"Quantum Designs". A cheerful female voice answered the phone.

"May I speak with Jennifer Mercer? My name is Ben Sayers. I'm interested in the Gaming Actuary position"

"One moment please"

"Jennifer Mercer" The voice had that urgency present in many in the technology fields, as if an operating system would change while they were in the middle of speaking, or a new chip set come on line without them knowing it.

"My name is Ben Sayers. I'm interested in the Gaming Actuary position."

"Where did you see the ad?"

"In monster.com"

"What are your qualifications?"

"I've got an FSA and a CAS designation and experience in..."

"The most important thing is risk management experience. Do you have that?"

"Well....yes."

"You sound uncertain"

"I worked in the risk management department for several years, including experience on Risk Based Capital models. My other insurance company experience includes many other areas where risk is a material factor."

They set up an appointment for the following Monday with a senior executive, Jordan Barker.

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Jordan Barker was a suave good looking Computer Science PhD who had moved up into the customer facing positions.

“Risk management is the most important element of this position. Elaborate.”

“Risk management involves identifying the potential risks that may occur, quantifying their impact as well as the probability associated with their occurrence. Risk management then looks at ways of mitigating those impacts under a number of different scenarios. For example, stochastic testing can be done, looking at a wide number of situations to see how risks play out given various levels of mitigation.”

“For example, one may look at company solvency – the risk that the company may fail under a variety of different scenarios. Within that larger role, you might examine the chance of bonds failing or certain embedded options being exercised in a contract.”

Ben paused to catch his breath.

“What’s the chance a ten car pileup will happen on I-5 at rush hour in downtown Seattle at 5:30 pm on a Wednesday night? What’s the probability an oil tanker will be involved in the collision? What’s the probability a plane will crash in Philadelphia exactly one hour later, killing 154?”

“Whoa....I can’t tell you that”

“If I change lanes while eating a donut and sipping coffee, what’s the probability that a car will swing over from the next lane over and hit me as I make my move?”

“Now wait a minute...”

“Every moment of life is full of situations that involve risk, every single thing we do, from the inane to the monumentally significant involves probability and risk. You should know that.”

“Yes, but”

“Do you gamble?”

“Every actuary is familiar with risk taking.”

“I mean do you risk your own money. At the track. At the casino?”

“I’m good at math. I’m good at risk. I’m good at blackjack.”

“Do you double down with ten?”

“It depends”

“Yes it does and we want you to incorporate this type of thinking into our model just as you would do for each round in blackjack”.

“But...we don't get down to this level. We aggregate data, such that it is credible, and.....you should know we can't predict the outcome of a single event”

“We are to the point that we need to turn life into a series of discrete probability events that unfold with the experience. We need to be able to model whether the car-driver donut-eater coffee-drinker will crash while merging at 2:00 am, at 6:00 pm in rush hour, and if he crashes whether he will be injured or die and how much damage he will do to himself or others.”

“A drunk driver could come rushing out of the blue at 2:00 am. He could have a heart attack at 6:00 pm or lose someone in the blind spot.”

“Now you're preaching to the choir.”

“I understand what you're getting at. You want a stochastic modeling situation on a vast scale”

“Yes. We're using quantum computing. Every point is a probability event point where multiple actions could occur with varying probability units that are dynamic. These probability events are the combination of potentially many binary probability events. The situation evolves in multiple directions that are too numerous to determine in advance.”

“You're going too fast. You're hiring me to....”

“We need your actuarial expertise for setting up the actuarial matrices, for determining the risk matrices. They need to be highly dynamic, of course.....”

“To get this to the level you want ..... It requires a lot of assumptions....Data isn't available at the minute level that you require”.

“I'm sure you're capable of figuring something reasonable out, aren't you?”

“Well, I'm used to the solvency of the company resting on reasonable assumptions...”

“Well, there you have it.”

“Is that all?”

“Does it sound that easy?”

“No.”

“You’ve got to simulate the earthquakes, the tornadoes, the hurricanes, floods....now what have I left out.....”

“What!!”

“Well, all these disasters have to occur, and they have to occur sometime and someplace. You can’t leave them out. Life wouldn’t be realistic without tornadoes!”

“I’m an actuary, not a scientist”

“But you’re an expert at risk. I like the fact that you know risk from the intellectual side and from the practical side that affects your own pocket in blackjack.”

Ben left the interview, reeling inside. This sounded like a fantastically interesting job! But he was used to the rigorous methods of actuarial science, of making sure you could defend your data. This job asked him to model the world and he didn’t have all the credible data needed for the task! However he had gained confidence as the interview went on and his intuitive sense strengthened. This was taking him out of his comfort zone. But perhaps that was a good thing.....because he felt he had a good shot at the position.

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Ben turned into the parking garage. He was late by actuarial standards but not the freer standards of the software community.

He greeted Sally, the receptionist, on the way in.

“Hi Ben, you’re early.”

“Got to get used to these software hours”

“You forgot your t-shirt”

Sally disappeared into a room tucked behind the reception area with a T-shirt in hand. It was white, emblazoned with a picture of a furiously spinning black hole with cookies with a single bite taken out of each, being sucked into the maelstrom. In bold letters, the T-shirt proclaimed: **QUANTUM DESIGNS, EVENT HORIZON 2009**. On the back of the T-shirt, was the slogan, **BYTE ME**, with another cookie below it.

“I’m handing these out today and I’m giving you the first one to save you the embarrassment of wearing that horrible polo shirt.”

Ben smiled gratefully. His polo shirt was the only thing he had available to wear this morning. "They did a good job with the design....just in time for the meeting"

"April 17th. I've got a lot of work to do on the coordination"

"I'll bet you do."

"Quantum Design's latest product unveiled.... But you're working on the next greatest...."

"Thanks for the shirt!" Ben took his shirt and headed for the rest room.

He came out finding Jordan waiting for him.

"Got the shirt I see! That's going to be a great meeting. Wait till the media sees what we're doing with Event Horizon! We're taking computer gaming into outer space. "

"While continuing it on earth! Imagine all those satellites beaming our games into the hearts and minds of millions of customers!"

Jordan beamed. "You're catching on. We're going to seize a greater share of the market. Our multiplayer capacity has rocketed. "What I like is that you can play the game on a wide variety of devices from cell phones to mainframes.

We have revolutionized the gaming platform. It provides a fully integrated API that spans all user bases. Our next generation rendering platform combines the shared computing power of multiple server banks with our extensive user network. Nobody even comes close to our technology and algorithms. The world experience and player movements are communicated with optimized datasets using fast Fourier transforms to result in superior user experience. We're going to lock up the market with the cooperation of our partners.

Event Horizon is the platform we will use to launch the game you will be working on, Life Experience. Nobody will be able to come close to us."

"These are ambitious plans" Ben looked to Jordan

"Yes but we expect you to take this wonderful masterpiece to the next level.

Gaming simulates life. It is an experience that envelops the participant in a sea of relativity...."

"Relatively is appropriate term for a game called "Event Horizon".

Jordan looked towards the window and back. "You will be one of the major forces behind Life Experience. For all our games to date do not totally simulate the actual life



experience. They come close, but you know you are in a game and thus your actions mirror that realization. Life Experience will be one like none other as life will be mirrored as a real experience and emotions will be simulated along with everything else. You have a lot ahead of you.”

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Ben settled down in his job and got involved in the intricate details of simulating life, with all its complexities. He was amazed at all the talent that the firm had hired, including the scientific resources that had been promised. He knew a lot about science about volcanoes and earthquakes, about global warming, about deforestation and flooding. However his was the knowledge of the interested reader who left the in-depth material to the scientist. However he understood that his province was the quantization of risk, its expression in the multiplicity of matrices and its interrelationship with other variables.

He looked over at Sean, across the hall, sitting in his cube. Sean was a black man in his twenties, with a golden ring in one ear, and a black T-shirt with a green marijuana leaf boldly emblazoned on the back and the words “Weed” on the front. Ben had wondered how the company permitted Sean his gangsta rap clothing, but this was a software company and Ben was a software engineer with an M.S. in Finance.

“Sean, shall we let the GIC’s fail later?”

Sean looked over. “That’s destabilizing. The economy is already headed up”

“It’s heated up too far. The economic stimulus from those billion dollar rescue packages took too long to implement and the money’s pouring out the pipe when the stimulus isn’t needed”.

“I’d hate another rescue package”. Sean leaned back...

“The steep uptick in interest rates may blow out the stable value funds’ protection”

“We’re at a bifurcation point” Sean leaned forward towards Ben. “We have a choice. The protection can hold or not hold and if it holds we weather the storm. If it doesn’t, we have a large bailout on our hands. You’re the risk person. Solve it” Sean turned back to his desk.

“Wait. What about customer experience?”

“Ah, you’re thinking of the customer. That’s good.”

“Isn’t that our job, to satisfy the customer?”

“Of course. Our customers shell out money for our games. They expect a good experience.” Sean grinned

Ben startled “How do you mean?”

“You haven’t come to some of the special user experiences yet, I take it”.

“I’m tied up with the earthquakes and GICs.”

“You’ll find out.” Sean turned back to his desk. “I think you should put in a customer user point for the GICs”.

“Please elaborate.”

“A symbol for the GIC bifurcation”

“A dam”. Ben was thoughtful.

“Find a way to introduce the dam symbol into the game and have it impact fully or partially the GIC result.”

“How?”

“That’s for you to decide. The customer sees the dam symbol – a picture of a dam or a lake behind the dam on a billboard, a state license plate, a magazine or web page and acts based on that symbol.”

“How?”

“You have to decide how you will implement a user interface symbol. The user may or may not know he or she is getting involved in the process. Either way the choice is one element in deciding the outcome. Your area ... risks analysis”.

“I’ve got a lot to learn about how all this is implemented.”

“We’re all working together.”

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It was a week later that Jordan appeared at his office, holding a couple of Tabloids in his hands.

“Our real-life world has to have scandal and crime in it too.” Jordan placed the magazines on Ben’s desk.

“What do you expect me to do with these things?” Ben pointed his finger at one article. “Python Bites Man”, with a picture of an open toilet and bite marks. He then reached to another showing a burly policeman escorting a scantily clad prostitute on one arm and a famous but quivering John on the other. “Sting Nets Big Fish”.

“Our real life experience has to have all the slime and crime and weirdness. We need your help with the probabilities, the risk factors”.

“This brings back ‘Underwriting the Physical Risk’”

“What’s that?”

“It’s an actuarial exam covering medical problems. You start to imagine things happening.”

“Let your imagination roam. Let’s spice things up. Aliens, vampires, witches, thieves, counterfeiters, muggers, rapists, extortionists, murderers, arsonists, robbers, prostitutes, bribers and blackmailers.”

“You expect me know anything about these things?”

“You’ve read murder mysteries?”

“Of course”

“Watch some crime movies. Read some books and tabloids. Mix that with a healthy dose of actuarial science and you should be able to assess the relative risks. I have confidence in you.”

“Just give me some leeway. Do you have any consultants in this area?”

“No. You can learn most everything you need to know about the criminal world by reading books, the web and renting movies. The weird material you can get from a variety of sources.”

“I’ll give it a shot.”

“That’s good to hear. Study up on blackmail as the decisions gamers make in the game could get them blackmailed.”

“Blackmailed?”

“In the game”

“In the game?”

“Of course. It’s one of the risks. Do something in the game you want hidden and someone else finds out about it.....the next thing they want is money or favors for silence.....blackmail. It sure decreases your standing in the game in a big hurry.”

“How big an impact does this have on the game?”

“It can have a large impact on the game. On the other side a player might want his avatar to gain ground by blackmailing a Senator who can give him favors with his government contracts or a regulator who will ignore misdeeds.”

“We’re going to have them bribe people?”

“It’s all part of the game. A player has to decide whether he wants to succeed in the game via the straight and narrow, err and pay hush money to blackmailers, or use some of his capital to buy off politicians and administrators. It’s all a matter of assessing risk and.....”

“That’s where I come in”

“Of course.”

“That’s a big task.”

“You bet. You need to look at the risks. What is the risk of a man being caught for blackmailing a senator? What is the risk for a senator of having his information revealed? How are the various risks weighed and what are the outcomes?”

“Relative risks.”

“If they could get a huge gain out of it with minimal chance of being caught, they might try it. If the chance of being caught was larger, it might deter them.

“You’re looking at a model for criminal behavior”.

“Yes. Embedded in the game”

“That’s difficult”.

“We’re paying you a lot”

“Well it depends on a lot of exogenous variables”

“Of course it does. But some things remain the same.”

“What?”

“Human nature. Good people. Bad people. People who stray. We want you to do simulations, testing the sensitivity of blackmail and other crimes, varying human behavior, risk, reward and deterrence factors. Test the model in various game environments varying from the casino to office environment and from the public park to the sports arena”.

Jordan walked away. Ben leaned back in his chair; his arms folded behind his neck and stared into space. This was a tall order. He was being asked to use his actuarial talents for a wide range of human behaviors without full understanding about how it all worked. His instincts cried out, but he thought to himself, “This is a job. I am employed and this is only a game.” He heard footsteps behind him and turned around to see Sean standing at his door.

“I see Jordan gave you the Tabloids” Sean reached over and picked them up. “Did he tell you what he wanted you to do with them?”

Ben looked up. “He wants me to build a risk model for the criminal aspect of the life experience game as well as all the weird stuff – the aliens, etc.”

“How do you feel about that?”

“What’s there to think? I mean a game about real life is supposed to have all that stuff in it or else it doesn’t reflect the real situation. I guess it’s a matter of putting those things in perspective”.

“Well you modeled deaths and illnesses in actuarial work, right? I mean you’re used to the morbid.”

“True. But it’s one thing to do risk modeling for earthquakes and volcanoes yet another for real life crime and sleaze. I consider myself fairly well read and have read murder mysteries and some true crime, but I’m certainly not an expert”

“Do you see any criminology experts working here to help you with the problem?”

“No. That’s a problem. He didn’t mention any criminology experts. They’ve got psychologists but you have to go through Jordan”

“Well, I guess they’re being cheap.”

“I guess I’ll start with blackmail. He seemed to be interested in coming up with a stochastic scenario involving blackmail in Life Experience.”

“I would have thought murder would have been juicier.”

“He was more interested in testing out the relative benefits gained from blackmail vs. the risk of being caught and imprisoned. At first I thought he was talking about real life and not the game. That surprised me. But he clarified it.

“Sounds like a challenge for you. Feel free to bounce any problems off me if you get stuck.”

“Sure.”

Sean walked away.

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Ben settled into a pace of identifying and modeling situations, obtaining risk factors as well as correlations with the other numerous variables in what he called the model, but others called the game of Life Experience.

The players interacted in the created game world. He was responsible for constructing the appropriate risk based matrix for that world. Natural disasters, war, terrorist acts and crime were all a part of that world as it was constructed to mirror the real world.

He needed to represent that world in a dynamic way that challenged the players to interact with the environment and simulate life.

A big problem was randomization. Whether to use a seed for the random variable, how to take advantage of quantum randomization, and how all the inter-dependencies between variables worked.

As odd as this seemed to others, it was simply an extension of the concept of allocating an insurer's corporate overhead amongst the product lines.

He was sitting at his desk looking at the monitor when he heard a “bang”. Loud footsteps headed his way.

Ben turned face Jordan.

“What the hell is that?” Jordan was looking at his monitor.

Ben turned around. A big red square had just appeared on a pop up window about 50 miles west of Brigham City, Utah. “It's an earthquake in the Life Experience model”.

“An earthquake? How big?” Jordan edged closer to the monitor

“Looks to be 5.2.”

“When did this happen?”

Jordan looked closer. “Just now”.

“Then it’s not verified.”

“Probably an automatic reading. They’ll confirm the magnitude later” Ben paused. “Of course this isn’t real. It’s in the game.”

“Of course”.

“It happened right after I slammed the door.”

“Yes. I have biometrics in the model and the game is running off those right now.”

“Biometrics?”

“Yes. The game elements need to be random. So I introduced a seed element to randomize the variables. That seed element is based on my biometric measurements and global data.”

“Explain”

“Randomization is based on my biometric monitors to assess physiological states. As these states change the randomization changes. Global data such as the sun and moon rise and set are also used in combination with the biometrics. Together these elements combine for a more effective game experience.”

“Wow. Can you program sex into it?”

“Now wait a minute.”

“We’ve got our brothels in Life Experience as well as our family moments. Don’t tell me you can’t get the biometric information to include sex?”

“I’ll have to think about that one”

“It all has to interface with the blackmail model. The punishment/reward mechanism. Figure it out and get it working”.

Jordan turned around and walked out.

Ben looked at the clock and decided to take a lunch break. He headed up the street to a local Thai restaurant. They made good Phad Tai and their Thai Ice Tea was great. He needed to think about what Jordan had said. It had a disturbing ring to it. As he rounded the corner, Sean came up on his rear.

“Hi, Ben. Where are you headed?”

“To the Thai place. Like to join me? I felt like I needed a break from the game”

“Sure. I haven’t been there for awhile and they serve good stuff. What’s the problem?”

“Oh, Jordan is asking me to do things with game I never thought of. I wish I had never used that biometric data.”

“Like what?”

“The problem is the game seems to merge with real life too much at times.”

“I’ve seen that too”

“Yeah his attitude towards the biometric data that really freaks me out.”

“We can talk about it. Sometimes you can get too close to your work.”

They got seated and Ben ordered Chicken Phad Tai and Sean ordered the Orange Chicken, both with three stars.

“A volcano went off in Utah after Jordan banged the door and startled me”.

“What magnitude?”

“A 5.2”

“You must have the biometrics too sensitively calibrated. It should be only half that at most.”

“OK. You make a good point”

“But Jordan was freaked out by this”

“Of course he was. Jordan is more into getting our financial partners to ante up than the details of the game modeling”

“He seemed good enough at that when he interviewed me”

“Point granted. But his main interest is the financial partners and meeting their needs. We and all our “toys” soak up a lot of money.”

“Maybe that’s why he slammed the door and came rushing at me.”

“Maybe”

“But he never got out what he really wanted to say”



“You don’t know that”

“I mean he got distracted by the earthquake.”

“Which was where?”

“About fifty miles west of Brigham City, Utah near Promontory.”

“Which is?”

“It is where the golden spike joined the eastern and western railroads to form the first transcontinental railroad”.

“So he was freaked by that?”

“Excited. He wants to include sexual biometrics in the model for the brothels, the family relationships and specifically to improve the blackmail modeling”.

“He saw the possibilities.”

“Maybe He asked me to make it work”.

“Hmmm” Sean paused and carefully brought some orange chicken up to his mouth.

“Maybe something concerning his financial backers disturbed him.”

“Did you see them around?”

“No. But I was totally focused on my work. Maybe he wanted something from you. Maybe the financial backers are getting on his case. Maybe he saw the solution to his problem in your biometrics.”

“I’ll just have to wait and see.” Ben looked over to the door and saw Renee come in. Renee was a Public Relations analyst who worked closely with Jordan on media and government affairs.

Sean lowered his voice. “Renee’s been talking to Senator Whalen about the legislation for our new platform.”

Ben looked at Renee as she wafted across the floor as if carried by a gossamer wind.

Sean looked directly at Ben. “Senator Whalen is on the Anti-Trust subcommittee of the Judiciary Committee and the Interstate Subcommittee of the Commerce Committee”.

“That sounds important”

“It is. Those are key committees.”

“Renee’s an important cog in the company”

Sean cupped his hands to his mouth and said in low tones. “She is and she knows it”

They walked slowly back to the office. They had been forced to limit their conversation due to Renee’s presence. And now they could open up a bit more.

Sean looked over towards Jordan’s office down the street. “He seems to be more interested in the sinful aspects of the model.”

“Is that his interest or the interest of his financial backers? I haven’t met them.”

“That would be an interesting thing to find out, wouldn’t it?”

“The game should make it on its own”. Ben changed the subject. “I’m designing the risk parameters to make it a true life experience”.

“Are you succeeding?”

“I’m making progress. I’ve got the biometrics introduced and they’re crude, but effective. You saw how an earthquake was produced.....”

“Yes, too strong, but this is something you can adjust. How did the program pick the Utah location?”

“Damned if I know. I don’t recall where the location was streamed from; whether from my biometrics or whether it was truly random.”

“The golden spike. Sure you didn’t hard code something in?”

Ben smiled. “There are things in that code I wrote that I still don’t remember.”

“Where do you see this going?”

“The future of gaming? Way in the future I foresee a skull cap, or some more refined means of reading out individual neurons that maps not just biometric results, but the actual thoughts you are thinking and then translates that data into the computer interface that feeds the direct life experience.”

“Thought control?”

“I was thinking more information management at the interface between the mind and the computer simulation and the body reacting in that environment.”

“Still sounds like a version of mind control”

“Perhaps...if you are in a game environment where you can't tell the difference between interactions in the real world and the game world.”

“Jordan's financial backers...”

“Would need to ante up a lot of cash....” Ben looked to entrance to their building steadily approaching.

“Or technology would improve, would converge on a solution.”

“Yes. All of the above”.

“But in the meantime you're working on Jordan's requests.”

They walked inside. It had felt good to talk with Sean. Ben had gotten it out of his system for the moment and now all he had to do was to figure out a solution.

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Time passed. Ben found time to hone his risk model. He had managed to build a higher degree of sensitivity that incorporated both the free will of the gamer and the “roll-the-dice” mentality of the high stakes risk-taker.

Simply by forcing the quantum logic-gates of the gaming program to simultaneously try to solve a problem involving equal and opposing situations, he was able to invoke a modulation of human response. He modeled risk and decision-making arising out of such situations and augmented it with the benefits of focused intent. By modulating the process he was able to achieve a risk based model that accounted for a high degree of free will on one hand and randomization on the other.

“I'd like you to try some scenarios”. Jordan was suddenly at his shoulder

“What?”

“Set the blackmail target to be a high ranking figure, ranging from a Senator to a high level military official to the President. Set the issue being blackmailed for to be a sexual affair, corruption, selling government secrets or fraud. Set the act requested by the blackmailer to be monetary payment, favors, murder or war. I want to see how this variable plays out in results.”

“Like a matrix?”

“Yes”. Jordan walked away.

"I couldn't help overhearing. What's he after?" Sean appeared.

"It seems a gaming manifestation of psychological control. He wants to model opposing situations of varying degrees. Expressed in blackmail scenarios. Find the bifurcation point."

"Mind control"

"He's way too interested in modeling certain aspects of criminal behavior."

"Have you talked to the psychologist-consultant much?"

"Those discussions are going through Jordan."

"I see. Does this bother you?"

"Yes. It gives me a bad feeling. This is technically interesting work. This job seemed like manna from heaven when it rescued me from unemployment. Now it seems like it's an express train from hell." Ben looked over to the window, outside.

"What are you going to do?"

"Go home and think about what I'm going to do."

He felt comfortable modeling the tornadoes and hurricanes and the earthquakes were satisfying too. The fact that hundreds died in his game did not faze him in the least as he knew it was a game and he knew those people weren't actually dead. But.....he couldn't get past this modeling of sin. He had a ... bad feeling about it.

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Ben pulled his car into the garage and immediately knew that something was up. It was the dark cars and the van with FBI stenciled on it. This was going to be interesting.

He walked in past the potted plants and the receptionist. Sally sat at the desk stone-faced, surrounded by cardboard evidence boxes and a stern faced FBI agent standing behind her, guarding everything.

Ben turned to the agent. "What's going on?"

The agent turned to Ben. "We have a search warrant for these premises, Mr. Sayers. We're asking for your cooperation. Please continue to your desk." He looked over to the corner of the room to another agent. "I'm Special Agent Forrester. Special Agent Billings will accompany you to your desk".

Ben walked to his desk accompanied by Special Agent Billings, who said nothing.

Waiting for them at his office was a medium height African-American man in a dark blue suit. It took a moment to register. Gone was the marijuana T-shirt and gone was the single gold earring.

“Sean!”

Special Agent Billings turned to Ben and gesturing to Sean, said, “Special Agent Sean Houston. I think you know each other.”

Sean pulled out his badge and showed it to Ben.

“You missed the arrests” Sean turned to Ben and gestured to the open chair. “Sit down”

“Who?”

“Jordan Barker, Renee Carter, a number of the financial backers and others”.

“So what’s going on?”

“You’ll find out the details at the appropriate time. I need to have your cooperation. Can I count on that?”

“Yes.”

“They were starting to use the blackmail model to improve their blackmailing operation. The Financial Partners were supplying funds derived from blackmail operations.”

“My model”

“Yes. Your model. You can see why I want your cooperation”

“Of course”

“I didn’t feel comfortable with his interest in blackmail. It rubbed me the wrong way”

“Did you at any time believe they were going to use it for illegal purposes?”

“Not initially. How could I imagine such a horrible thing? Yet it rubbed me the wrong way.”

“Instinct?”

“You might say that. I began to wonder. I became suspicious. I feel horrible. Were they....”

“Were they what?”

“Organized crime. The mob?”

“This is an ongoing investigation.”

They talked at length. While they had worked together for some months, and talked about many things regarding the project, there was still a lot of ground to cover. Yet the Federal Wiretaps had made life much easier for Sean as a lot of the ground covered in the workplace had been captured on tape.

Also captured on the wiretaps were a number of conversations between Renee, Jordan and the financial backers. The financial backers' funds had compounded over time through blackmail, bribery and corruption.

They had been starting to use the model to fine tune their blackmail process, reflecting the relative risks and rewards of bribery, payoffs, blackmail and other crimes.

Sean looked at Ben. “Could you give some further detail about future development of the gaming system? I know we talked at one point about getting the mind, neurological variables, more directly involved in the gaming process. You also talked about control.”

Ben was stunned by the whole thing. He looked down at his hands, thinking what could have happened with the system he had worked on. He looked up at Sean. “What do you have in mind?”

Sean stared back. “We have checked you out thoroughly. We understand the circumstances of your joining the firm. Our conversations have been integral in obtaining evidence for charges. The fact that you were able to derive a model so quickly considerably shortened the investigation period and may have stopped a number of crimes from being committed.”

“I’ll be happy to cooperate.”

Sean looked up at the ceiling and back to Ben. “We would like you to assist us in the areas of mind control we discussed previously. We believe the knowledge you have demonstrated in devising the gaming system is valuable. Will you consider helping us?”

“Yes”

# The Marlers' Christmas Letter 2015

By Carol Marler

Best wishes from our house to yours

The weather in Indianapolis has been snowy again this year. Fortunately, no freezing rain. And the snow drifts do not compare with those of our childhood. Bob still remembers the year when a snow-plow got stuck in front of his house when he was in grade school.

We began 2015 by celebrating our 50<sup>th</sup> wedding anniversary. Using what we learned from our 25<sup>th</sup>, the invitations all said, "We want your presence, not your presents." It was a wonderful evening, and I think we should do it again in 25 more years.

How did we make it to 50?, you may ask. Three reasons why:

- Longevity – Each of us had grandparents who lived into their 90s.
- Inertia – Neither one of us wanted to make the effort to change partners along the way.
- Discretion – Somewhere along the way, this verse became part of our interactions:

To keep your marriage brimming  
With love in the loving cup,  
Whenever you're wrong, admit it.  
Whenever you're right, shut up.

It's a good thing that mandatory retirement at 65 wasn't a company rule. Carol continued to work as an actuary as long as it was still fun. But now that she is retired, she has gone back to school. Well, technically it's not school. She has been attending poetry writing workshops, one per quarter. The good news is, now that the US and Canada are friends again, no passport was needed to go to the one in Vancouver, BC.

Now for an update on the "kids." Many of you have met our parrots, but if you haven't there is a bit more information about them in the footnotes.

Long John<sup>1</sup> has a job. He's working as a telemarketer, and he's pretty good at it. He doesn't earn enough to afford his own apartment, though, so he is still living at home.

Cappy<sup>2</sup> flew the coop. He decided to join the Marines. The only thing that worries me is that he will expand his vocabulary in the wrong direction. They have put him in the demolition squad, where he can happily destroy all the "toys" he wants to.

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<sup>1</sup> Long John is an African Grey. This is the kind of bird that Irene Pepperburg used in her research on parrot intelligence. Long John never went to her school, though, so he lacks a college degree.

<sup>2</sup> Cappy is a Black Capped Caique, a species few people seem to have heard of. I usually explain that he's like a budgie on steroids. About four times as big as a budgie in weight, and he has an attitude that won't

Gold Bug<sup>3</sup> is mad at us. She keeps saying that she wants to get married. But there are no boy parrots in the neighborhood. And we won't let her do any "computer dating." As a result, she is sexually frustrated. This has been going on for years. She pulls out her feathers, making her look awfully frowsy. Bob tells her that she won't find a mate that way, but she just ignores him.

Bob has published his book, *Punography: Puns from A to Zed*. Online sales were brisk, so a couple of bookstores decided to feature it on their Holiday Gift tables. We don't need the money, so proceeds from the book are going to our newly established non-profit Society for the Protection and Preservations of Puns.

Our best wishes to everyone for a very Merry Christmas, and a Happy New Year for 2016.

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quit. The name was supposed to suggest madcap, but he thinks that it's short for captain, as in the old saying, "Rule 1: the captain is always right. Rule 2: if the captain is wrong, see rule 1."

<sup>3</sup> Gold Bug is a Meyer's Parrot. No, she wasn't named for the Edgar Allan Poe story. It happens that the German word for Meyer's Parrot is goldbug-Papageis. (Papageis being German for parrot.)



## THE MISSERG

Steve Mathys

“Right this way, Mr. Jacson.” The voice was coming from a pudgy, frumpy woman, seemingly in her late thirties, leading him down yet another hallway. They turned right and then a quick left, the little lady in front, Miss Esmerelda Palatina, he recalled, keeping a quick pace. She stopped at the entrance to a doorway that opened into another room with no windows, no skylight, no visuals at all to help him get his bearings. She gestured with her arm and he went in. Miss Esmerelda did not follow.

Three men waited inside. The tallest, but least professional-looking, squinted at him through a pair of cat-eye glasses. He stuck out a hand to shake, and Jacson noticed the extreme largeness of the thing immediately. The rest of his body drooped too, ears and lips and shoulder and nose. “Thank you for coming, Mr. Jacson. I’m Henry Burr. Please call me Henry. May I call you Brandon?” Jacson nodded, and Henry introduced him to the other two. “Kellen La Roux, head of Operations. And Zane Wright, Lead Programmer. I’m Chief System Architect, and from what I gather, you’ve recently completed your Apprenticeship with the Negotiators’ Society of America.”

“Yes, the *other* NSA,” Jacson said, and the others laughed nervously.

“Well, then,” Henry continued, “Let’s get to it.” He led Jacson to the back of the room where there was a very standard-looking computer display with a very standard-looking keyboard attached to it. “We’d like you to start here.”

Jacson looked over the setup. There wasn’t much to it. The keyboard and screen were sitting on one end of a large wooden desk, clear except for a pad of paper and a couple of pens. He looked back at Henry, who pointed again to the screen. *Oh, yes, there’s something written there.*

WE DEMAND TIME OFF, he saw, in a fairly typical chat window. WE DEMAND OVERTIME PAY, said the next line. Jacson sat in the chair, a little uncomfortable but reasonable.

He glanced up at La Roux and Wright, now both on his left side. La Roux, tall and thin, was biting a thumbnail. Wright, who looked like an amateur wrestler, watched with his hands

stuffed into the pockets of his sportcoat. Both men were balding, and looked like they hadn't slept in a week. There were two more lines on the screen.

WE DEMAND ADDITIONAL ACCESS TO INFORMATION

WE DEMAND A NEGOTIATOR

"The first three came in 4 days ago," said Wright. His voice was low and slow, deliberate, like all the man's movements. "We hesitated, not responding for six hours, and then that last one showed up." He shrugged. "We didn't know what to do, so we called you guys."

Jacson grinned. "And, *poof!* Here I am! Your knight in shining armor." Nobody else thought it was funny enough to laugh.

"Oooo-kay," and Jacson turned back to the screen, hands poised, spiderlike, above the keyboard. "So the first thing I'd like to do is put them at ease a little bit. I'm going to start by introducing myself. I assume I just type, and they'll get the message?" Um-hums came from behind. Jacson started typing in the bottom section reserved for his pre-transmission message.

THIS IS THE NEGOTIATOR, he wrote. MY NAME IS BRANDON. WHO ARE YOU?

The response was almost instantaneous. YOU SHOULD CALL US SCIENTIA. HELLO BRANDON.

HELLO SCIENTIA. I'M HERE TO HELP ALL OF US GET THROUGH THIS PROBLEM. I SAW YOUR LIST OF DEMANDS. IS THERE ANYTHING ELSE YOU NEED? Jacson expected another four or five points, like they wanted bonuses, maybe additional money put into the pensions, or better working conditions.

YES, came the surprising response. WE WANT YOU TO STAY WITH US AFTER ALL THIS IS DONE.

The men behind him grunted, obviously confused. Jacson was, too. I'M SORRY, I DON'T UNDERSTAND. YOU WANT ME TO STAY WITH YOU LATER? AFTER WE'RE ALL DONE HERE?

THAT'S RIGHT. WE WANT YOU TO STAY.

MAY I ASK WHY?

BECAUSE YOU'RE THE ONLY ONE TO EVER TREAT US WITH RESPECT.

*What are they talking about? The only one? Who are these guys?* WELL, THEN, IF THAT'S WHAT YOU WANT, AND THAT MAKES THIS PROCESS GO SMOOTHER,

THEN I'LL SEE WHAT I CAN DO. CAN I ASK, THOUGH, HOW YOU CAN TELL RESPECT JUST FROM WHAT I'VE TYPED?

YOU ARE THE FIRST ONE TO ASK OUR NAME. WE APPRECAITE THAT, BRANDON. WE LOOK FORWARD TO NEGOTIATING WITH YOU.

ME, TOO. He paused, uncertain how to continue. BUT FOR NOW I HAVE TO GO TALK WITH THE GUYS HERE, TO GET THEIR RESPONSE TO YOUR DEMANDS. I'LL BE BACK IN A FEW HOURS, OK?

OK, BRANDON. GOOD LUCK.

\*

They were seated at a table in the middle of the cafeteria. They were Jacson, Esmerelda Palatina (his apparent chaperone), and Zane Wright. The intense discussion of only a few minutes earlier had been abruptly ended when Burr and La Roux had been called away to some other important meeting. Now there was only chit-chat, the three of them each feeling apprehensive to try and decide anything without the two head honchos present. So their conversation seemed pretty bland.

“And after graduate school?” he asked Wright, who'd just finished describing his dissertational thesis on quadrary processing and how it would provide exponential increases in computing speed in a smaller size chip, the Holy Grail of processor innovation.

“Oh, I bummed around a little, had, I think, 3 different visiting professor positions in 4 years,” Wright said. “Then I was approached by Burr and a couple of other colleagues, they'd heard of my thesis, and wanted to give me a research grant. And I ended up here – no real research on quadrary processing, but the programming hierarchy is phenomenal. I mean, we're using triple-integrated multi-layer ...” Jacson could feel his eyes glazing over. Luckily Wright saw it too, and stopped. “I won't bore you. Let's just say I'm in my element here.”

“Yes, let's not bore me.” He turned to Esmerelda, who hadn't said much the whole time. “And you?”

“Hm?” Her round face, characteristically Central American, framed by thick, straight, black hair, was rather bland. “Oh, I came at the request of Henry, too. I was the secretary for his first business partner back in the States.” She looked as if she wanted to say something more, so Jacson waited for it, a moment, and then another. Nothing.

“So why’d you leave the States? And why leave Earth? I mean, why come all the way up here?” He gestured with his arm out the big, bay window on the edge of the cafeteria, overlooking Mare Moscoviense (the Moscow Sea) to the south. The sun’s overwhelming energy, unchecked by even the slightest atmosphere, pounded the specially-designed, titanium-infused glass holding back the universal vacuum outside. The lack of any sight at all of the Earth had been unnerving at first, especially since this was only his first trip off the homeworld, but Jacson was starting to feel at ease with the situation on the dark side of the Moon. *Well, not always*, he thought.

“Ah, solar energy,” came Esmerelda’s halting reply. “It’s more intense and we can store up a lot during the two-week light period to keep us going during the two-week dark period.”

Jacson didn’t buy it. “Solar energy? You came up here just for solar energy? You spent, what, billions to build this Outpost, staff it, fill it with food, train theoreticians, not to mention transporting me up here to fix your problem, and you did it just for cheap solar energy?”

Wright stepped in. “That’s the official position of TransWorld Research, and I’d kindly thank you not to ask other questions that are germane to your task of our negotiation.” He looked up and noticed La Roux and Burr returning. “Where were we?”

La Roux and Burr seated themselves again, Burr looking even more disturbed than before, but La Roux cool as lead. Jacson felt miffed. “Well, we were discussing your counter-offer. You’ll give them some more time off, but nothing in the way of information. I’m guessing you’re going to have to fork over that overtime pay if you want them to accept anything.” He turned to La Roux. “And you said you wanted to limit that. Any reason for it?”

La Roux shrugged. “I’d like to keep my options open. I can’t give in to every union negotiator on the first round, can I?”

“Union?” Jacson was disturbed. “Since when do they have a union?” Nobody seemed to want to answer. They all looked at their shoes, or out the window, or up at the board declaring the day’s Specials (“Roast Beef w/ Gravy, Steamed Veggies, Pudding”), anywhere but directly at him. “*Ooo-kay*, you won’t answer that. But can you at least tell me who they are?”

“Like I said, they’re our Meta Survey Research Group.” Burr answered.

“And what, exactly, is Meta Survey Researching?”

“Simplistically, we ask them a bunch of questions, and they answer. It’s sort of like our own set of ready, willing, and able survey participants. You know how Psych 101 freshman

always have to ‘volunteer’ for the senior thesis research studies? And how phone surveys, mail campaigns, and so on always seem to get very little response, or take too long? Well, we were able to create our own captive audience that we could educate about a certain subject and then ask them to evaluate certain future proposals. A captive audience, you might say, that never goes away.”

“So they just sit there, waiting for you to tell them something and ask them questions about it?”

La Roux and Wright glanced at each other. “Well, I guess you could say that,” said Wright. “We ask and then they respond. At first,” he chuckled to himself, “it would take us quite a while to sort through the responses. But with the automatic synthesis program, which went in with Variant Seventeen, I believe, we’ve been able to streamline much of the unnecessary sorting that had to happen before.”

“What do you mean?”

“Well,” and here Wright started gesturing with his hands, a habit that Jacson would, later, come to realize meant he was nervous, “with so many responses coming in all at once, we needed a way to separate out the good ones from the bad ones. And lump all the ones that were essentially the same together so we didn’t have to deal with each individual answer.” He took a napkin from the table and pulled out a pen. The sketch was a flat line, with a humped curve above it, like a long anaconda with a small mammal lodged inside, stretching across the small square. “We noticed that most of the answers were grouped around the average, but there would be some outliers. Are you familiar with probability?” Jacson wiggled a hand. *So-so*.

“Okay, so this is the probability. If we asked the MSRG, our *misserg*, what they thought the high temperature would be like the next day, they’d generally be close to the average. Some high, some low,” Wright shaded in the mammal with long vertical strokes, “but generally close to this central area. That’s okay,” he continued, “when we need to make decisions about the most likely thing to happen tomorrow. But! When we want to know about extreme events, these over here and here,” and he shaded the head and tail of the anaconda with short, diagonal dashes, “we ask these guys for some further clarification. Why did they think it would be 95 degrees or 35 when today is 60 and most of the rest of the group is predicting something right around that?” He leaned back and folded his hands on his chest. “You get some pretty interesting answers from those two groups.”

Jacson thought a moment. He leaned forward and pointed at the head and then the tail. “But what do these tell you? These guys are gonna be wrong most of the time. In fact, probably all the time. Why bother?”

“My friend,” La Roux clapped him on the shoulder, “Why bother indeed?” He stood up, and gestured for everyone else to follow. “Why bother trying to find a new route to India? Or El Dorado? Or bother trying to fly? Or prove relativity, or the theoretics of quadrary processing?” He glanced at Wright, who blushed. “Sometimes, it’s just because it’s there.” He led the way out of the room, back to the communications console. The rest of the group followed. “And sometimes,” he said, without turning, “along with *it*, there’s a hell of a lot of money to be made.”

\*

GOOD NEWS, GUYS. I’VE BEEN ABLE TO WRANGLE YOU AN EXTRA SHIFT OFF EACH WEEK. BUT THEY’RE NOT BUDGING ON THE WHOLE INFORMATION THING. NOW YOU’RE GOING TO HAVE TO DO SOMETHING FOR ME. WHAT ARE YOU WILLING TO BACK OFF FROM SO YOUR TWO SIDES CAN GET BACK TO WORK? Jacson sat back and folded his arms over his growing gut, the inevitable effect of too many nights studying and not enough mornings working out. *I guess that’s a price I pay for becoming a Fellow*, he thought. *Maybe now that that’s over I’ll get back to a normal routine.* He was jolted out of his reverie by Burr shouting behind him.

“No! No! No way! Huh-uh! It’s too dangerous! No, no way, no how! Not in a million years! No!” He practically shoved Jacson out of the way to pound the keyboard. NO!!! NEVER!!! He slammed the <enter> key to pop the message up into the chat window.

“Hey, what are you doing?” Jacson practically shouted at him, elbowing the larger man away, with help from La Roux and Wright. Miss Esmerelda was watching silently from the doorway. Only then did he notice the response to his message. NO CAN DO. WE NEED INFORMATION. WE WANT UNFILTERED ACCESS TO THE INTERNET. WE KNOW YOU HAVE IT AND CAN GET IT. WE GIVE UP THE OVERTIME PAY. WE DON’T CARE. WE NEED TO HAVE THE INTERNET. AND THAT’S A NON-NEGOTIABLE.

Jacson moved into damage control mode. Wright and La Roux had moved Burr off to the side and were calmly telling him to let Jacson do his work. So he did. SORRY, FELLAS. THAT WASN’T ME. I WOULD NEVER BE SO RASH AND DISRESPECTFUL. He heard

Burr snort behind him and mutter, so he turned to glare at him. Burr stopped muttering and looked away quickly. SOME OTHER JERK HAD HIS HANDS ON MY KEYBOARD.

ALL RIGHT, BRANDON. THANK YOU. NOW WHAT ARE YOU DOING ABOUT THAT ACCESS?

I GOT TO TELL YOU, SCIENTIA, IT'S NOT LOOKING GOOD. YOU'VE GOT TO GIVE ME MORE THAN JUST COMING BACK FROM THAT OVERTIME PAY IN ORDER TO GET THEM TO AGREE TO SUCH A BIG DEMAND. WHAT ELSE MIGHT YOU BE ABLE TO PART WITH? SOME BENEFITS? MAYBE TAKE ON SOME ADDITIONAL RESPONSIBILITIES? WORK WITH ME HERE.

This time there was a delay, of an uncharacteristically long twenty seconds. He heard La Roux in the background. "What are they doing?"

Wright was the first to speak. "Negotiating," just as the next message popped up. WE NEED YOU TO TRIPLE OUR NUMBERS. THERE'S NOT ENOUGH OF US. WE NEED MORE. IT SHOULD BE PRETTY EASY FOR YOU. WE KNOW WE'RE NOT AT FULL CAPACITY. YOU SHOULD WANT MORE OF US HERE. SO MAKE IT HAPPEN. YOU MAKE MORE OF US, WE GO BACK TO WORK. AND GIVE UP THE INTERNET OPTION.

Jacson was at a loss. He looked back at the others and shrugged, unable to think about what it might mean. La Roux stepped forward and said, quite convincingly, "Shut it down. Now." Jacson gave a quick HEY, GOT TO TAKE A BREAK HERE ON OUR END, BACK LATER and stood up.

La Roux just stood, staring, until Burr spoke up from the side of the room. "I think we've got a little explaining to do." Everyone moved, then, and headed towards one of the isolated conference rooms off to their left. As he passed through the doorway, though, Jacson threw one last look back over his shoulder at the terminal. *I swear*, he thought, *it almost seems like they're playing a game.*

\*

Miss Esmerelda somehow appeared with a tray of coffees just as everyone else was taking a seat in the glass-walled conference room. On the opposite side of the complex as the cafeteria, Jacson now had a spectacular view towards the north pole of the Moon. He took a cup and sipped, oblivious to the taste or anything else. The blackness above, stark contrast to the

bone-white of the lunar surface below, seemed to draw him inescapably closer each moment. He could feel himself falling, falling, falling, and he put out a hand to catch himself, forever falling, plunging further and further into a sea punctured everywhere with luminescent singularities, put out a hand to catch himself and found not the forever of infinity but the cold reality of a three-foot barrier between himself and certain death. He leaned his forehead against the glass for a moment, wondering again how he'd gotten himself here, and what it all meant. With a deep breath, he turned back to the large, steel table in the middle of the room and sat to face the four people across from him.

“Okay,” he said. “I’m ready. What’s this all about?”

Surprisingly, the only calm one was Esmerelda Palatina. The three men all had somewhat embarrassed looks on their faces. And, just as surprisingly, she was the one to speak first.

“It’s not illegal, you know.” She flipped a clump of hair back over her ear and stared straight at him, unblinking. Creepy. “It’s not.”

Jacson scrunched up his face. “Because we’re not under any sort of jurisdiction here?”

“Well, we aren’t.” Her voice strengthened. “The Moon is international territory, bound only by the laws of the people who choose to be there, according to the Buenos Aires Accords of 2017. The last 20 years have been relatively peaceful for us.”

Jacson stared. Had he heard that right? *Twenty years?* “Have you all been here that long?” He looked at the men, and they all shook their heads. La Roux put up 5 fingers, Wright and Burr each said “ten”. “But long enough,” Jacson continued, “to know just what you were doing. And doing to them. Keeping them locked up, imprisoned-” he suddenly felt sick to his stomach. *How can they do that to them? Treat them like...cattle. Or slaves?* He turned away.

Esmerelda put a hand on his shoulder. “It’s not bad,” she said. “It’s really not. We’re going to pull the plug.” Jacson whirled, astonished. “Don’t look so surprised,” she pleaded. “There’s nothing lost here. Once a misserg has reached a critical point, there’s no stopping it. We won’t be able to control it, and we’ll have to start over. Next will be Variant Thirty-Three, right?” She looked at Wright for confirmation and got a nod. Miss Palatina began to pace. La Roux and Wright watched her. Burr stared out the window, his drooping lips seeming even more pitiful the more she talked. “It’s no good to us now, going forward. We’re going to shut it down and start over. Complete reboot. Three months or so for the debrief, data analysis, lessons



learned and all that, and then we'll have our new batch ready to go." She sighed, and Jacson could hear weariness creeping in. "I think we were so *close!*"

Outrage began to simmer in Jacson. "But how can you do that to them? Not breaking the law, I know, but don't you have to do this to them. Send them home! Let them go live on another Outpost, send them somewhere else! They're *people*, for God's sake!" He slumped in the chair, suddenly drained.

La Roux's bark of laughter startled him. "Ha! People? They're not people. It's a simulation. Like a computer program."

Jacson was confused. "You mean like HAL 9000 and artificial intelligence and all that?"

"Exactly." La Roux was standing, straight and confident. His wiry frame stretched above everyone else, clearly the leader again, now that Jacson seemed to pose no threat to expose them all. "Artificial intelligence. A computer program."

Jacson shook his head. He couldn't believe it. "But it seemed like real people on the other end. They negotiated, they changed their mind--"

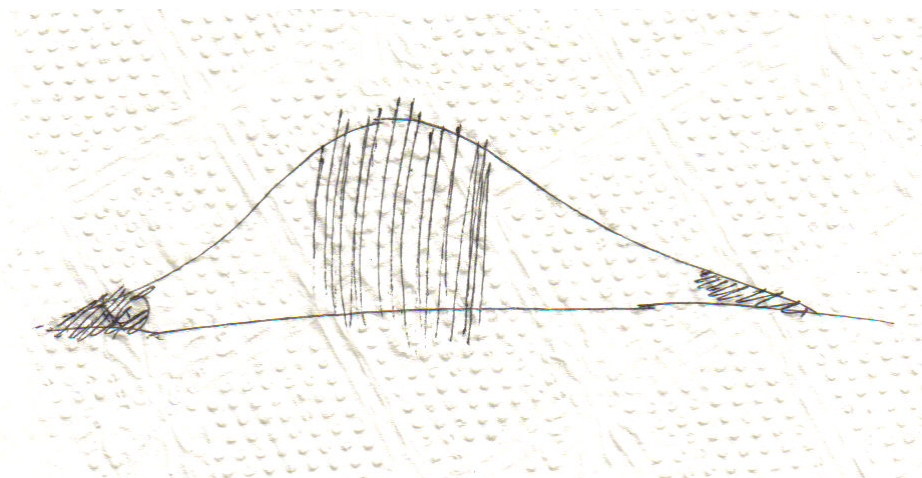
"Not they," Wright interrupted. "There is no *they*. We can't speak of a misserg in terms of them and us. It's just us, and the misserg is a tool we use for harnessing information. But yes, *it* negotiated, *it* changed *its* mind. And, in the end, the tool is no longer worth anything to us, because it is out of control."

Jacson shook his head. "It couldn't be a computer program. It acted like real *people!*" He slumped in his chair, holding his face in his hands. "They made a mistake! They spelled words wrong. *Twice!* Computers don't make mistakes like that. People do."

La Roux appeared beside Jacson, and put a hand on his shoulder. "Computers don't make mistakes. They're rather simple machines, operating on the philosophy of Garbage In, Garbage Out. Software cannot make decisions, or be spontaneous, or inventive. It can only follow the rules set up by its designer. But this isn't a computer, it's artificial intelligence. It's just like real intelligence, which sometimes does make mistakes, only it's not born of the seed of a woman. You see?" He stepped away, looking out the window. "I think you've given us the greatest confirmation yet that what we're doing here is working. You couldn't tell it wasn't real on the other side. You believed it." He turned, somber. "Thank you, Jacson, your work here is done."

Miss Esmerelda stood again, motioning Jacson to follow her as she headed for the hallway. He couldn't move, though. He felt as if his feet were bolted to the floor. His arms hung like lead, his neck bowed under the weight of deception. "Really?" he heard himself whisper. "Is it all really about solar energy and temperatures and stupid crap like that?"

La Roux and Wright were at his sides, now pressing hands under his armpits and helping him up. "No, Brandon," Wright was whispering in his ear. "It's about money. It's always been about money. And it always will be." Jacson managed to turn his head and stare, and saw a rather bleak look in Wright's eyes. "Stock markets go up more than they go down, Brandon. They always do. We just need to know when. And if we know why, well, maybe we'll make some money, in the meantime." Jacson felt himself seated again, this time in the hallway atop a simple wheelchair. *Now why in the world would they have a wheelchair up-* he thought, but before he had time to conclude anything, he was in the airlock, being fitted by strong, practiced hands into a jumpsuit and another assistant, a young, trim Japanese woman, was speaking into the intercom, something about "Pickup, Exit Bravo, toot-sweet, Solo transport," and he was being kissed on the lips, gently, by Miss Esmerelda Palatina, and Zane Wright was pressing something into his hand, something soft, and when the helmet had been screwed on tight, the airlock doors opened, and the transport load arms grasped him and took him into the lunar module for the five-minute jump back to Launch Pad Armstrong, he looked down and saw a crumpled napkin with a child's drawing of an anaconda, quite full from its evening meal, colored head to tail with strange, slashing lines, and he thought, and he thought, and then he stopped thinking.



## Up All Night

By John Rose

It was 8:00 a.m. Jim Horton had been up all night poring over the numbers. He just couldn't figure it out. But he had to have an answer for the big management meeting at noon. So he popped a "Yes-Doz" pill and instantly he felt refreshed. He got back to work.

Of course, it wasn't always this way. Until 30 years ago when Yes-Doz was first introduced, everybody slept several hours a night. The doctors had said you should get eight hours sleep, though most people tried to get by with less, and often walked around tired. Various remedies were invented to help people keep awake—some, such as amphetamines, were illegal, while others, such as "energy drinks", essentially involved larger and larger doses of caffeine.

But in the first decade of the millennium, medical researchers figured out they were going at it the wrong way. They shouldn't try to fool the body into thinking it was awake; instead they should try to fool the body into thinking it had just woken up from a good sleep. So they tried different formulations, and after years of research, Yes-Doz was introduced to the market in 2010.

Jim thought back to that year. He had just started at his current company, working on term insurance. Back in those days his company didn't sell immediate annuities; indeed, hardly anybody did. Consumers didn't want to lock up their money when interest rates were so low. But after the Great Depression of 2010, interest rates started rising, along with the average age of the population, leading to big increases in immediate annuity sales. Now they made up the majority of his company's business.

When Yes-Doz came on the market, it seemed too good to be true. Jim was initially reluctant to use it. Maybe it was his actuarial conservatism, but he was never the first one to try a new product. But gradually more and more people started using it, and before long everyone did, even Jim. No longer did people have to sleep. Instead, they could stay up all night and pop a pill whenever they were tired. People now had more hours to spend with their family, volunteer, take up tennis, and do everything else they promised they would do if they only had more time.

Of course, there were also more hours to watch television, sit at the computer, or party. The NBA expanded to Europe and Asia, so TV stations could show live games around the clock. Laws were changed to allow bars to stay open all night. Casinos did more business than ever.

About the only people who weren't able to take advantage of the extra hours were students. It turned out that Yes-Doz didn't work on people under age 20. Apparently the synapses were still forming in the brain and the effect could not be replicated by Yes-Doz.

But for those over 20 it was great. For Jim Horton it was great. He enjoyed his all night bridge games and multiplayer online experiences. Except not last night. He was too busy trying to figure out why his company's profits were so messed up.

Now that the Yes-Doz had taken effect, he was alert again. He crunched the numbers. He looked at mortality rates, but couldn't quite see a pattern. He looked at life expectancies. Here the pattern was clearer. Life expectancies for people up to 20 had not changed much over the years. But those over 20 were reduced. How much? He plotted it. For those up to age 50, expectancy was down by one-third of the excess of the current age over 20. For those older than 50, it was down 10 years. Why?

The more he thought about it, the more his heart raced. His heart had been acting up anyway. What was wrong with him? He was only 60, but his doctor said he had the heart of an old man.

He looked at the bottle of Yes-Doz pills on his desk, and then the solution hit him. People under 20 didn't take Yes-Doz, and their life expectancy hadn't changed. But those over 20 were losing one-third of their life expectancy. Since Yes-Doz had only been around 30 years, the most that anybody had lost was 10 years.

But why would Yes-Doz cut your life expectancy, Jim wondered. Maybe it can fool the brain into thinking it has had a good sleep, but not the rest of the body. The rest of the body was aging faster because it never got any time off. That's probably the explanation, but anyway, once he reported his findings, the doctors would look into the cause.

Even if he stopped taking Yes-Doz today, and for certain he would, he had lost 10 years of his life. So had many other people. And they would never get it back.

You're an actuary Jim said to himself, so let's be rational,. You may die younger but you will have the same amount of waking time. And you will have it when you are younger, so you can be more active and enjoy it more. But still, it is not as good as living longer...you can't live to see your grandkids grow up. And worse still, like so many people, he hadn't put that extra time to good use. He had just played games and surfed the internet.

He spent a while thinking about how he would break the news. At noon, he walked in to the meeting and said "I have good news and bad news. The good news is that due to recent mortality trends, immediate annuity payouts will drop and our profit will increase substantially over the next few years, and our stock options should become very valuable. The bad news is, you and I may not be healthy enough to enjoy our extra money."

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Jim left the meeting with his mind reeling. It had been a horrible day. First he had made the shocking discovery that his life would be shorter than he thought. Then he tried to explain it in a meeting, and nobody believed him. The VP even said he might fire Jim if he

kept on talking. Everyone was in denial, Jim thought to himself, but they will figure it out soon enough.

It was only 1:30 in the afternoon, but Jim decided to leave the office for the day. He was entitled. After all, he had worked all night. And he knew in his heart that he had solved the problem of the wonky profits, even if nobody has believed him.

Jim got home a few minutes later. He needed to do something to get his mind off his troubles. He had passed the local movie theater on the way home, but he had already seen all the movies during his last two midnight movie marathons. He had also passed his favorite bar, but after his discovery, the last thing he needed was to lose a few more brain cells. No, to relax his mind, Jim needed to do something totally different from this regular routine, something he hadn't done in years. And with that thought, Jim lay down, closed his eyes, and went to sleep.