

NATURAL EVIL

Monday.

Armor. Check. Caleb still wore the helmet from the Parks Department give-away, eight years ago, 200,000 helmets in three months. After Caleb almost plowed into a line of people on the Rockaway boardwalk, he saw the helmets being passed out. Ten minutes in line, then another five to make sure he knew how straps went. That was the point, not so much the helmets, but getting people to learn how to wear them properly. Another man would have started thinking about who paid whom, and for what, to get a city contract for 200,000 helmets. That never occurred to Caleb. Until about six weeks later.

Mount. Check. Tires at 110 PSI. no contact between the tire wall and a thumb. Cables taught, travel limit screws set correctly, shifters on the down tube, where they belong. No kinks in the brake cables. And the bell gives off a nice, clear Zen chime, gradually merging with the Cosmic All.

Mounted. Armored. He could read and write, and owned a get-away house upstate with a little property. He knew his family's lineage. He had everything it took to be a Knight Errant. On a whim last year, he had bought greaved gloves at a Medieval Days fair, but Knight or no, they weren't good for biking.

Wallet check. Credit card. The Metrocard his company gave out to employees; not that he needed them, as he got to work by bicycle. He got a lot of ribbing, not for riding a bike, but he kept getting asked if he knew his own odds of survival on two skinny wheels next to 4,000 pound vehicles going twice his speed. He laughed those off; in Manhattan, on an original Trek 400, the one in mangalloy with helicomatic gears, he was going twice as fast as they were.

He ordered in French when he breakfasted at Maison Keyser; in Arabic if he just got coffee from the old Saracen in a cramped food cart near his office. On principle, if he dined at a French restaurant, he would always order a *Sarasin galette*. Just to keep it neutral. He had no stake in the war, which apparently hadn't ended after more than a thousand years, between the Franks and the Saracens. Although his crusade was solitary, Caleb held out hope that it could change the world by orders of magnitude more than any armed priest could.

“Keeping the kids safe today, June?” Caleb always asked that of the elderly crossing guard. June liked it when her job was noticed and appreciated; and she always gave Caleb the hi-sign when the red-light trap cop wasn't hiding behind the phone booth off the bike lane on the next corner. “You know what the 3rd grade kids did for me?” June asked. “Bought me a dozen roses and some chocolate. Here, have a praline, it's cold out here.” Caleb ate it while the Don't Walk light was ticking down, then kicked off right at the green with a wave for June and clicked the gears up, always a half-step at a time. He sped up along the First Avenue bike lane; fewer traffic lights, but more hills and wind. Just as he liked it. At the U.N. General Assembly building, Caleb stopped, as always, to read the Isaiah Wall and then waved at St. George fighting his nuclear dragon.

Turning left and into midtown, Caleb started spotting some of his “people.” “New sign?” Caleb asked the seemingly not quite down and out enough for panhandling fellow on 45th and 3rd.

“Last week your sign said your benefits were being held up. Now you want to go to Buffalo?”

“The benefits are intra-state. And I may have a line on something up there. Over there. Up there. Both, I guess,” the guy said.

“Is there a central depot for cardboard signs somewhere? Ones with the most effect? Here, do you know how to use this? It’s a transit check card. There’s enough on it to get you a train or bus to almost anywhere. You can’t buy anything else with it, though. Sorry.

“Buffalo. City of no illusions. Well, I hope you get what you want, guy.”

Lexington and 47th must have gone for a break; his stuff was in a neat pile by the free newspaper box. But Madison and 51st was there.

“Here you go, Sweetie. You can use this more than I can,” Caleb said, handing her his lunch. Her sign had a pregnancy count-down chart and also told the visitors to her corner that she had no place to go. “You’re eating for two. And take this.” Caleb handed her the city social services guide. He always handed her one. He didn’t want to hand her cash — The entire time he saw her on her corner, it had been too warm for long sleeves.

Up to 57th, swing around to 5th, roll the bike into the parking area. No more in New York City would bike commuters have to fear having their rides stolen; Mayor Bloomberg had made sure that every office in the city was required to accommodate bikes. What a kerfuffle ensued during that fight, pitting lobbyist against landlord against tenant, brother against brother. And up the elevator to work. Downstairs and outside, he was a Knight Errant. Upstairs and inside, he was a seer, a prognosticator, an oracle. But also, still a knight. Caleb started singing his actuary song when he stepped into his office. Leonard Cohen: “Who by fire, and who by water, and who in her lonely slip, and who by barbiturate.” He couldn’t say who would go in what way, but he knew how many would go in each way. And if he saw you, he could size up your odds for you right quick.

“Coffee, Honey?” That never got old. Caleb interviewed sixteen people for the secretary — administrative assistant — position; the seventeenth was a woman named Honey from Ivory

Coast. He could call his secretary — administrative assistant — Honey, without fear of recrimination. He could say “Coffee, Honey?” all day long. Of course, Caleb made the coffee himself. Beans in a little freezer in his office, grinder in a desk drawer. Electric percolator. That was coffee. Caleb poured himself and Honey each a cup and began his day at work. That would start with reading three newspapers, well, skimming them, anyway. Looking for trends to feed some Bayesian subjective probabilitiesⁱ into what should be pure coin toss or hypergeometric calculations.

“Look at this, Honey. Millennials aren’t buying cars anymore. Reach out to Sid in Demographics, will you? See if they can figure out where the cars aren’t being sold. Correlate with lung disease morbidity and mortality. Let’s see what we come up with.”

“You got it, Chief.” Once Honey figured out why she was hired, Caleb went from Mr. Hoffman to Chief. Turnabout, and all that. “Hope you find what you’re looking for. You know that New York, Philly, Jersey City, and Baltimore have the lowest car ownership rates but they still have plenty of COPD.”

Caleb gave her a sideways glance, part impressed, part annoyed. “Pay attention, Grasshopper. Why do they have low car ownership? Why do they still have a lot of choking people?”

Honey rolled her eyes. “Because I-95 goes through all of them? Tens of thousands of trucks a day? And people own less cars because they can’t fit any more on the roads, and they have subways?”

“When you can snatch the calculi from my hand, Grasshopper, it will be time for you to calculate. But we’re looking for the delta—the CHANGE in car ownership. Now get outta here, and get me some numbers, too.”

Coffee drunk, conversation had, lesson established, Caleb went about his day. This mainly consisted of figuring out what the lowest price an underwriter could charge for life insurance, based on a given data set for a collection of individuals. He easily earned his mid-six figure salary, easily because the job was hard. The shoe and haircut crowd were in charge of how much people would pay for life insurance, based on which post-modern-irony television commercial played in what market.

Two emergencies handled — best way to predict massive mortality spikes due to structure collapses (you can't — there's always going to be someone in the design, materials provision, implementation and inspection phases doing the wrong thing) and something really important, the NCAA March Madness brackets. Enough work for the day, time to go home.

And then Caleb donned his helm, strode his mount, and set off for home and errantry. Maybe Joelle, his next-door neighbor, would have the dream catcher hanging by her living room window, right where Caleb would spot it as he made the turn to their apartment building. But at Lex and 36th, he saw something new in the panhandling game. Several of Caleb's regulars were wheelchair bound, and wheeled over along the left side of the street to the corner to shake their cups at traffic stuck at the light. Sometimes it would be a bonanza for the invalid... the dreaded Ouroborosⁱⁱ Effect, AKA the Outer Boroughs Effect. This occurred when a street approached a grid-locked perpendicular avenue, penning in the cars on the street, while the cars on the avenue behind got **stock** in the gridlock of the street, blocking off more streets before the initial gridlocked street. The snake eats its own tail.

The new guy was sitting in the street, legs splayed, crying. Caleb dismounted.

“Groceries. I can't even get any groceries. They said they can haylp me.” A transplant to the Big Apple. “Groceries. ‘N I couldn't cook ‘em up if I got them.”

“What do you need?” Caleb offered. The dialog started to sputter out. Not a pro panhandler. Or a really good one. No matter. “Hey, buddy — give me a hand here, will you?” Amazing. People in this town had to think twice about getting a guy up and off the street. Caleb fished into the handlebar pack and came up with the jump-start kit: Metrocard, transit check with enough on it to get a bus to anywhere home might be, Boston Market gift card, list of every free lunch in the city, schedule of every 12-step program for anybody’s problem. Wouldn’t be enough. Caleb hailed a cab and sent the groceries guy -- now talking about a hospital, maybe — to Sheila, battle-hardened social worker. Then he gave Sheila a heads-up call and resumed pedaling, pushing the button which released the nose-thumbed, spring-loaded clown from the rear left panier, and whizzed past the cars seemingly glued to the road.

The rest of the trip to the Freehold — Caleb was not under fealty oath — was almost uneventful. Until the joust. Going south down the Second Avenue bike lane, Caleb had to detour into the unreserved lanes to get around a Guardia armored car parked in the bike lane. He returned to the priority reservation and continued downtown, but an Uber was trying to pass him in the “mixing zone.” Caleb always thought of it as a mixmaster zone for anyone getting tangled in it. Caleb hit the alert. Two air horns and strobes in three colors got the attention of the Suburban performing the reckless (causing a vehicle to break or swerve) maneuver. The Uber managed to knock off its own passenger side mirror on a temporary street sign post (which had pictograms for ‘left turn yield to bicycles’) while over-correcting the turn. The driver of the car behind, a Honda with Jersey plates, was awake and undistracted enough to avoid a collision.

Caleb approached the Uberista and handed her a copy of sections 510 and 1212 of the New York Vehicle and Traffic law.

“Madam. You’ve attempted to cut off a moving vehicle and ignored the sign requiring you to yield. This is a \$393 fine plus five points on your license. Reckless driving is a misdemeanor. Tell me that you’re sorry and that you’ll never do it again.”

“Qo'rqma, eshakni qoqinib oling.” Caleb recognized this, from the barbershop he frequented, as Uzbek, but could only imagine what it was she said. He figured a \$300 repair for the mirror would be penance enough. But it had been a while since Caleb rode out of the lists, and he decided to hassle the armored car. He walked the bike back to the truck and took out his cop-style forms book, something he picked up from a theatrical props & supplies store. He started writing in it, then took out his smart phone and hit the app Joelle had written for him; it would send a strongly worded message to the armored car company, and send an alert to the truck’s insurance carrier. And then enter it into the attorney database. And that was about as much fun Caleb needed for the day.

Tuesday.

“Morning, Honey! Coffee? Breakfast biscuits? Joelle baked them and packed me off with them.”

Honey couldn’t resist anything freshly baked. “Sure, Caleb. Guess what you got this morning? Bet you haven’t gotten one of these in quite some time.”

“A suit that comes with a vest and a second pair of pants?”

“Not back quite that far, boss. You got a fax. Sue in the mail room was almost apoplectic, she thought the machine was just there because nobody got around to tossing it. It’s from Sheila.”

Caleb looked like the gears in his brain started engaging, and then his mouth went into operation. “Why would two people with email communicate by fax? Well, let’s see what she’s got to say.” Caleb looked at the output. “Zounds! This is a homeless guy I picked up off the street on my way home last night. Literally sitting down in the actual road. And here he is in a tux. Boy, Sheila does fast work. Oh no, wait. This is a concert poster. From 1972.” Caleb reflexively spread out his thumb and forefinger to enlarge the image and read what it said, then realized the fax wouldn’t get any larger. Then he started patting his pockets for reading glasses. Naturally, he eventually found them, on top of his head.

“‘Bucket Brigade: An Evening of Harmonica, Jew’s Harp, and Found Percussion.’ Sgt. Jubal Freeman. Sheila says he was wounded in Iraq, a tiny piece of shrapnel hit his lip and he lost whatever harmonica players call their embouchure. Then it was a balls-up between veteran’s benefits and social security. Maestro Sgt. Jubal Freeman had fallen through the cracks. And now he’s found. Honey, do you think you could research this Bucket Brigade, find anyone who was in it?”

“Boss, if I can’t find three or four out of 20 top-flight harmonica people, you should fire me!”

“Never. What’s next on the list?” Knights Errant always moved forward.

“We’re getting some preliminary data on car ownership by location. It’s U.S. census material now; Sid said not to trust industry figures. You can see our loss data from the system for each city. After that, you are Bwana. Good hunting, I hope you bag what you’re looking for. Any hints for the bush beaters?” Honey played her royal African roots to the hilt.

“Get someone at the Lung Association or Cancer Society. Is there a pulmonology society? Get them too. I want to know if reducing car ownership drives down lung disease

mortality.” He winked at the photo of William Vickery on his desk. Columbia professor of economics, Nobel laureate. Rode around Morningside Heights on roller skates; how could he be an economist and NOT get around on skates?

Caleb got around to the work. It was two hours flitting between paper reports and the screen before he let the water vapor of opinion form around the dust grains of fact, allowing it rain ideas. And the first idea was “Honey, this can’t be right. How can car ownership go down and lung disease go up? I mean, as a general rule. I haven’t controlled for anything yet. Okay. Get me the top 20 Demographic Market Areas for drop in our loss, correlate with changes in lung disease hospitalizations. Get me local smokestack data for each of them. Pick six other factors out of hat, get me the data on them.”

“You really wanted bike riding to show up as something, didn’t you? Listen, Grasshopper — and turnabout is fair play — what is it **about** the bicycle that bestows environmental virtue? Or as Dick Cheney might say, what is it about personal virtue?”

“Honey, you’re not a princess for nothing.”

More coffee, more harvesting and mining of data, lunch from Fika, and the rain of ideas starting to become hail of anger. Another day over. Over for work, anyway.

Riding home, seeing Joelle’s feathery web. A man and a woman in a rarified pleasure, possibly the only people in the city playing 2-handed euchre. And then the toga party — Joelle picking up from where they had left off previously, reciting the Iliad in Greek. Joelle gave Caleb a naughty grin when she got to the topless towers part. Breakfast eventually, and another bag of biscuits.

This time the biscuits would go to June.

Wednesday.

“It’s against the law to bribe a sworn officer, Caleb. What is it you’re going to ask me?”

“It’s about that third grade class of yours. Do you think you could get me an in with the principal? I’ve got an idea that might make a lot of people happy. The school’s still underfunded on music programs, isn’t it?”

June thought about it for a moment. She wasn’t technically on the school staff. “I’ve noticed a lot fewer violin and clarinet cases this year, so I suppose the answer is yes. Whadja have in mind?”

“Oh, this is going to be good. And fun.”

June blew him a kiss. “Just as long as it doesn’t tarnish the sterling reputation of the department. Cross and Guard, our sworn duty.” Caleb appreciated the nod to duty.

Third Avenue and 45th came up in a flash. Now the Buffalo guy’s sign read “Feeling guilty? I’ll take **YOUR** Trump money.” It looked like a mash-up between Candorville and Non Sequitur comics.

“Morning, Budrick.” Caleb never knew the man’s name. “They’ll be needing that money back soon enough. He had to borrow money to give it away; when the bill comes due, everyone’s adjustable mortgage is going to adjust in a very unpleasant way.”

“Of course. But this can make them feel good NOW.” The answer was worth a double saw-buck.

“Coffee, Honey?” Caleb had to rummage through a pile of print-outs to find the grinder hidden under them, somewhere on his desk. He could smell it, but not see it quite yet. “There it is. What is this stuff you dumped on my desk?”

“It’s what you asked for, Caleb. I’ll make the coffee today. You read that pile and make the connections.”

Like John Doar, Special Counsel for the United States House Committee on the Judiciary during the Watergate hearings, Caleb referenced each page by who, what, when, where, source of the material, funding for the material, why, and *really* why. Every document generated eight index cards, a different color for each attribute. And at the end of the day, shuffling and reshuffling the cards, pausing only for coffee (incoming and outgoing), like John Doar, he figured it out. He asked permission of Honey to allow a kiss on the cheek, which she granted, planted a wet one on her, and was out the door heading back downtown. If Joelle’s dreamcatcher was up, she would be drafted into translating from idea to exec-speak

Joelle had actually forgotten to take the dream catcher down from the day before, but she didn’t seem to mind an additional visit from her friend. And what a visit it was.

“Well, Professor Logarithm, looks like you’ve got a two-headed snake on your hands.” That was Joelle’s reaction to what had been handed to her as one report but was now returned to Caleb as two.

“I see what you mean. I was looking at the numbers and not the implications. I was wondering why Honey stuck in losses that weren’t hours, stuff from all over the world. Anyone can have an earthquake, an avalanche, a flood, a tornado. That’s just math operating on the moving parts. Force Majeure, acts of God, “Natural Evil,” what have you. But the damage and the results of the damage are on us. The kill rate is squarely dependent — and I mean that technically, as in correlation values — on the people. Political resignations; arrests, indictments, convictions for bribery, charges and counter charges. Even without overt scandals

that come to light, voting records factor into this mix. The execs like to chew over numbers. This can be a major revenue increase. Bonus for me.”

Joelle looked at him in a not-so-well-disguised judgmental way. “Or....”

Thursday.

By tradition, the power center of insurance companies in New York was John Street. The big-wigs enjoyed watching the clueless equities folk lemming-marching to the stock exchange each morning.

Caleb enjoyed the ride down. He took an extra \$200 with him, he didn’t know what to expect. Ordinarily, the money zone was to be avoided. The panhandler rate was about the same on Broadway headed downtown as it was on Madison Avenue heading up. Until he started smelling money. Cardboard signs and jingling coffee cups were rare. Interesting. Caleb had noted that people don’t panhandle where the natives have no hearts. He locked up his bike at City Hall Park — let someone steal it from there — and walked his briefcase into the profit lair.

“Professor Hoffman. We don’t get to see much of you downtown.” That was Roger Sherman. The Man from Hartford. Direct descendant of the Roger Sherman whose signature is on the Declaration of Independence.

“Rog. Folks. Something bubbled up in my shop over the last few days. Something that affects your bottom line.” Saying “your” instead of “our” was a riposte. Roger Sherman could subtly remind everyone at the table that Caleb was an academic, not a money guy. Caleb needed to remind Roger Sherman that he was in it for the beauty of the numbers and that he was above mere profit. “I have in my briefcase two reports. It took about \$20,000 of company money to

compile them. The first report is a list of 17 major market areas. If you quietly stop advertising in these regions and start severing ties with independent agents there, your annual loss will go down by 4%.” A big amount considering the number of policies the company had in force. “Report two is the reason why report one can save you 4% a year in losses. Report two, if implemented, could save you 9%. Please remember, folks, a decrease in loss means a decrease in people getting killed. Report two was prepared in my capacity as a visiting professor of Actuarial Science at Cornell, even though it was done while I was on the clock in New York. This is a check for \$10,000, the cost of the report.”

Diminutive Vicky Speaksman, the lawyer, was about to go apoplectic. She looked like she had literally gotten her pantyhose in a knot. “Those reports are work product. We own them. If you steal from the company, you’re a thief, whether or not you compensate us.”

Herman Van Pelt, the grownup in the room, stepped up to play peace maker. “Vicky, that’s a pretty loud broadside for something we don’t know what it is yet.” Herman’s specialty was minor rips and tears in grammar, leading people to think they were better than he was. Making them think he was non-threatening. “Just what is it you’ve got in that report two? And while we’re talking about reports, we don’t even know what report one is, you just said it was a list.”

“Hi Herman! Good to see you again. Charlene doing okay? I heard you got your handicap down to four. Report two says that weather, geology, and fire, even epidemics, don’t kill people as much as people kill people in the context of weather, geology, fire, and structural collapse. The report establishes mathematically the marginal propinquity to die relative to the level of corruption in both the people who make the rules — for a fee — and the people who enforce the rules — all too often, also for a fee.” I’m going to publish my results. If our trade

group then insists that these 17 areas must be cleaned up before any of us can do business in them, there will be a scramble to comply. Lives will be saved, losses will be lower. You pay me an extra hundred thousand a year as long as I am an Ivy League professor, I have to profess, and this is what I'm professing. Your loss will go down 9%, but so will all the other companies' losses."

Roger started foaming almost as much as Vicky. "You've given us a \$40 million advantage with one hand and taken it away with the other. Not very sporting of you. A \$40 million bump would have translated into a pretty decent bonus."

"Sporting, Roger? You've got my check. It's a fact that the coefficient of determination of corruption, actual, not just legally enforceable, to accidental and lung disease deaths is 92%. It's a fact that you hired a professor, it's my job to get this out there. Cash the check or not, fire me or not. But if there are lives to be saved with number crunching and audits, I'm going to get those lives saved. Ladies and gentlemen, good morning to you all.

Three months later.

The day of the concert, Sgt. Freeman's re-entry into society, arrived. The David Dinkins Charter School for Math managed to put together a box for the honored guests. Caleb had the pleasure of escorting Joelle to the concert, joined by Sheila, June and Honey, now a freshman researcher at Rand, and their respective consorts. June managed to get the word out to the parents to treat this as a black tie affair. Grownups tried to squeeze into seats designed for 6th-graders. Parents jockeyed for the best vantages to record the show. Maestro Sgt. Jubal Freeman took the stage and took a bow. And then six harmonicas and four slide kazoos came out with the

world's most famous symphonic Everyone was amazed at how the “toy” instruments could replicate the sounds of three violins and a contrabass. Of course, these were kids, there were some blown notes and stumbles, but Jubal managed to hold it together. Honey took advantage of the smooth sailing to whisper a question she needed answered. “When was it you started your secret life as a poker sharp? Before or after the, um, meeting? That isn't very Knight Errant, is it?”

“Honey, El Cidⁱⁱⁱ provides the model — in his case, not a very good one — for funding a knightly mission. In my case, I was more than fair. As you may or may not know, there's a longstanding expression, ‘Never play cards with a man named Doc.’ I do have, after all, a PhD. Ans I still have to earn a living, don't I?”

Joelle nervously anticipated the opening of the final movement, the Chorale. Fortunately, German and English were close enough so that the translated words would scan. She lost her modesty and humility when the eight little choristers came on stage and began singing her updated version of Schiller's poem:

Joy, beautiful spark of the gods,
Daughter from Elysium,
We enter, drunk with fire,
Earth, thy sanctuary!
Your magic binds again
What convention strictly proscribes;
All people become cousins
Where your gentle wing abides.

Who has succeeded in the great attempt,
To be a friend's friend,
Whoever has won a lovely mate,
Adds to the jubilation!
Indeed, who calls even one soul
Theirs upon this world!
And whoever never managed, shall steal himself
Weeping away from this union!

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Acknowledgements are a rarity in short stories, but I would like to give a shout out to a biologist, Dr. Fazale Rana, for his presenting of hard numbers and research with respect to “Natural Evil.” When you can pin something down to numbers, the joust is half-way won.

ⁱ Bayesian Probability is what math problems would be if the answers were dependent on what people thought the answers were.

ⁱⁱ Driving in Manhattan, you might as well be eating your own tail.

ⁱⁱⁱ The legendary Iberian hero, not El Sid, the pitcher.